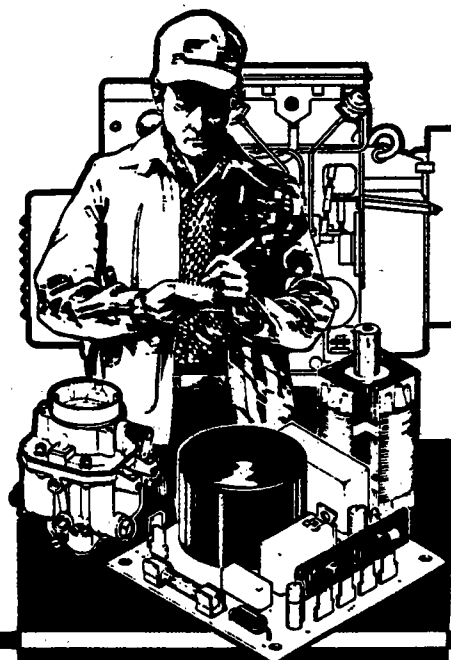


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has gaps in its page
numbers, or doesn't
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Onan

Parts Manual

EN
GenSet



Onan Service Parts

928-0221
6-85 (SPEC A-D)
Replaces
5-80 (SPEC A-D)
Printed in U.S.A.

General Information

For parts or service, contact the dealer from whom you purchased this equipment or refer to your Nearest Authorized Onan Parts and Service Center.

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.

The image shows a rectangular nameplate template with rounded corners and two circular mounting holes at the top. The Onan logo is prominently displayed at the top. Below it is a wide rectangular box labeled 'MODEL AND SPEC NO.'. Underneath that is a smaller rectangular box labeled 'SERIAL NO.'. The bottom right corner of the template is folded over, revealing a second identical template underneath. The text 'M-1149' is printed at the bottom right of the template.

Onan

MODEL AND SPEC NO.

SERIAL NO.

M-1149

For handy reference, insert "YOUR" nameplate information in the spaces above.

INDEX

12	Actuator - Governor	42	Radiator
24	Adapter - Carburetor	8	Regulator - Alternator
6	Adapter - Engine to Generator	72	Regulator - Switching
8	Alternator	76	Regulator - Torque Match
62	Ammeter	28	Regulator - Pressure (Gas Vapor)
8	Belt - Drive	68	Regulator - Voltage
4	Cable - Battery	88	Rotor - Exciter
42	Cap - Radiator	84	Rotor - Generator
82	Capacitor Assembly	4	Sender - Pressure (Oil)
24	Carburetor - Gasoline	4	Sender - Temperature (Engine)
28	Carburetor - Gas Vapor	6	Sender - Temperature (Oil)
53	Chassis	48	Standpipe
22	Cleaner - Air	84	Stator - Exciter
62	Control - Engine	84	Stator - Generator
66	Control - Generator	4	Solenoid - Starter
12	Control - Governor	89	Suppressor - Voltage
26	Converter - LPG Gas	52	Switch - Level (Coolant)
6	Coil - Ignition	84	Switch - Overspeed
46	Exchanger - Heat	4	Switch - Pressure (Oil)
42	Fan - Cooling	6	Switch - Temperature (Hi Engine)
51	Filter - Coolant	6	Switch - Temperature (Low Engine)
13	Filter - Oil	30	Switch - Vacuum
83	Filter - Voltage Regulator	44	System - Cooling (City Water)
6	Flywheel	46	System - Cooling (Heat Exchanger)
62	Gauge - DC	41	System - Cooling (Radiator)
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84	Generator	48	System - Cooling (Standpipe)
10	Governor - Mech	34	System - Dual Fuel (Gas/LPG Liq)
12	Governor - Elec	32	System - Dual Fuel (Gas/LPG Vapor)
8	Guard - Belt	30	System - Dual Fuel (Gas/Nat Gas)
42	Guard - Fan	36	System - Dual Fuel (LPG/Nat Gas - Manual)
4	Harness - Wiring	38	System - Dual Fuel (LPG/Nat Gas - Auto)
23	Heater - Air	28	System - Fuel (Gaseous)
80	Heater - Control	24	System - Fuel (Gasoline)
56	Heater - Coolant	26	System - Gas Conversion (LPG)
90	Heater - Generator	62	Tachometer
13	Hose - Oil	40	Tank - Fuel
41	Hose - Radiator	78	Transformer - Current
81	Housing - Control	14	Tube - Exhaust
60	Housing - Set	44	Valve - Control (Temperature Regulating)
62	Light - Indicator	13	Valve - Drain (Oil)
24	Line - Fuel	32	Valve - Shutoff (Fuel)
14	Manifold - Exhaust	26	Valve - Solenoid (Fuel)
66	Meter - AC		
30	Mixer - Fuel (Gaseous)		
53	Mount - Vibration		
18	Muffler - Exhaust (Ind)		
20	Muffler - Exhaust (Critical)		
12	Pickup - Magnetic		
24	Pump - Fuel		

INTRODUCTION

This Parts Manual applies to the Generator Set(s) listed below. The illustrations are arranged in an assembly of related parts, and each part or assembly is identified by a reference number. All parts illustrated are typical, and unless otherwise mentioned in the description column of the parts list, the parts are interchangeable between all models.

These typical illustrations are subject to change and reflect only the latest replacement for the original factory installed parts. The Right and Left sides of the Generator Set are determined by FACING the engine end (FRONT) of the SET.

Set Data Table

MODEL IDENTIFICATION	KW RATING	RPM RATING	BATTERY VOLTAGE
50.0 EN - */#£	50,000 WATTS	1800 RPM	12 VDC
55.0 EN - */#£	55,000 WATTS	1800 RPM	12 VDC
60.0 EN - */#£	60,000 WATTS	1800 RPM	12 VDC
65.0 EN - */#£	65,000 WATTS	1800 RPM	12 VDC
70.0 EN - */#£	70,000 WATTS	1800 RPM	12 VDC

Electrical Data Table

*VOLTAGE CODES	VOLTS	HERTZ	WIRE	PHASE	NOTES
3	120/240	60	3	1	
6D	240/480	60	4	3	
7	220/380	60	4	3	
9X	347/600	60	4	3	
15	120/240	60	12	1	+
15	120/208	60	12	3	+
	120/240				
	127/220				
	139/240				
	240/416				
	254/440				
	227/480				
53	120/240	50	3	1	
515	110/220	50	12	1	+
	115/230				
515	110/190	50	12	3	+
	110/220				
	115/200				
	115/230				
	120/208				
	127/220				
	220/380				
	230/400				
	240/416				
	254/440				

* - Voltage codes follow model letters designations.

- Specification number; number 1 is standard, all others indicate variations.

£ - Specification letter; letter advances (A to B, B to C, etc.) with major manufacturing changes.

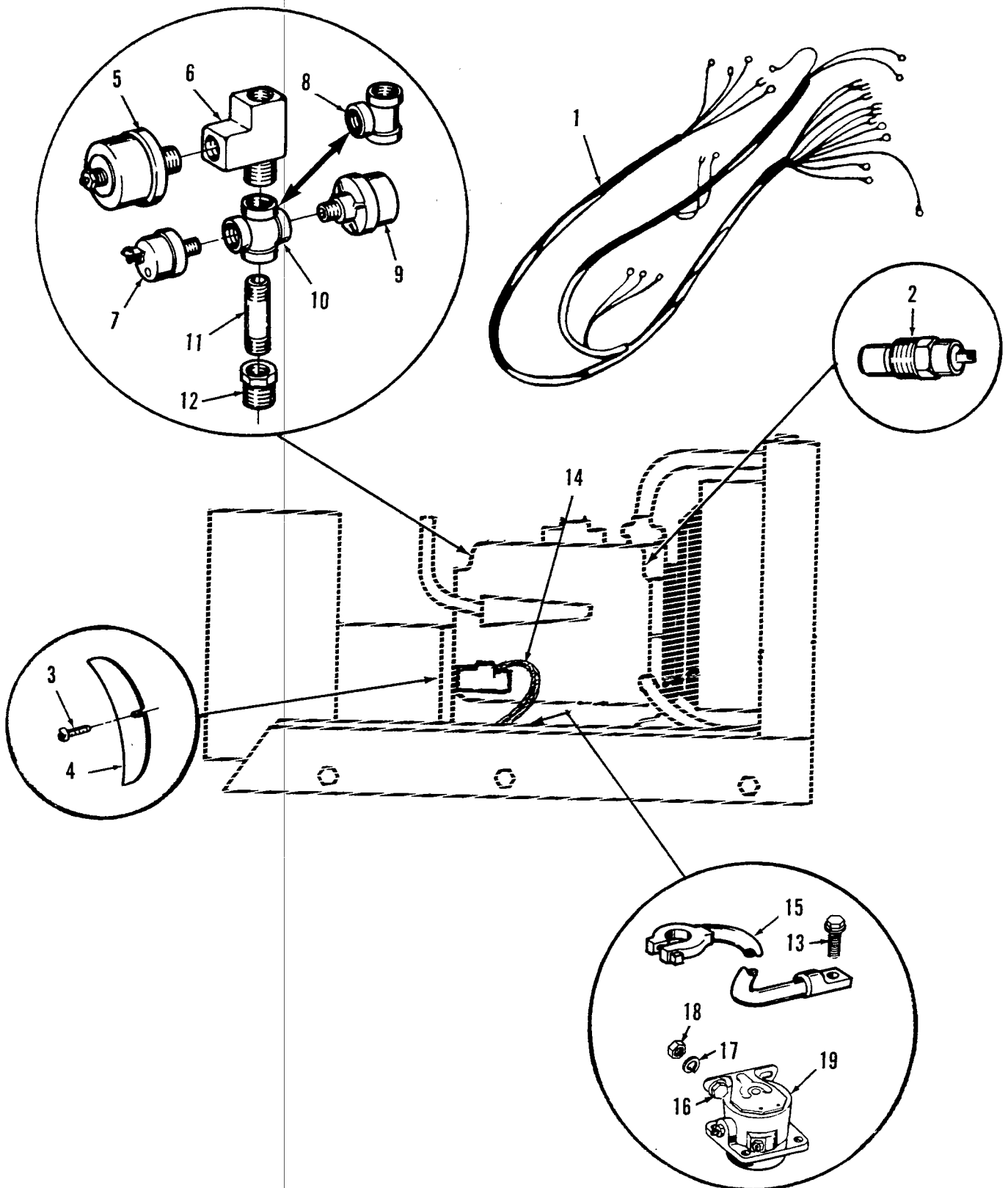
+ - These generators are reconnectable, refer to Operator's manual for wiring data.

- cont -

Engine Replacement Parts

All engine replacement parts must be ordered from the engine manufacturer, except those modified or added by Onan. When ordering engine parts, refer to the engine manufacturer's nameplate and supply the Model, Spec, Serial numbers and other available information. Refer to the engine manufacturer's manuals for your nearest authorized distributor or parts center; or contact the Onan distributor from whom you purchased this Set, for assistance in ordering replacement parts.

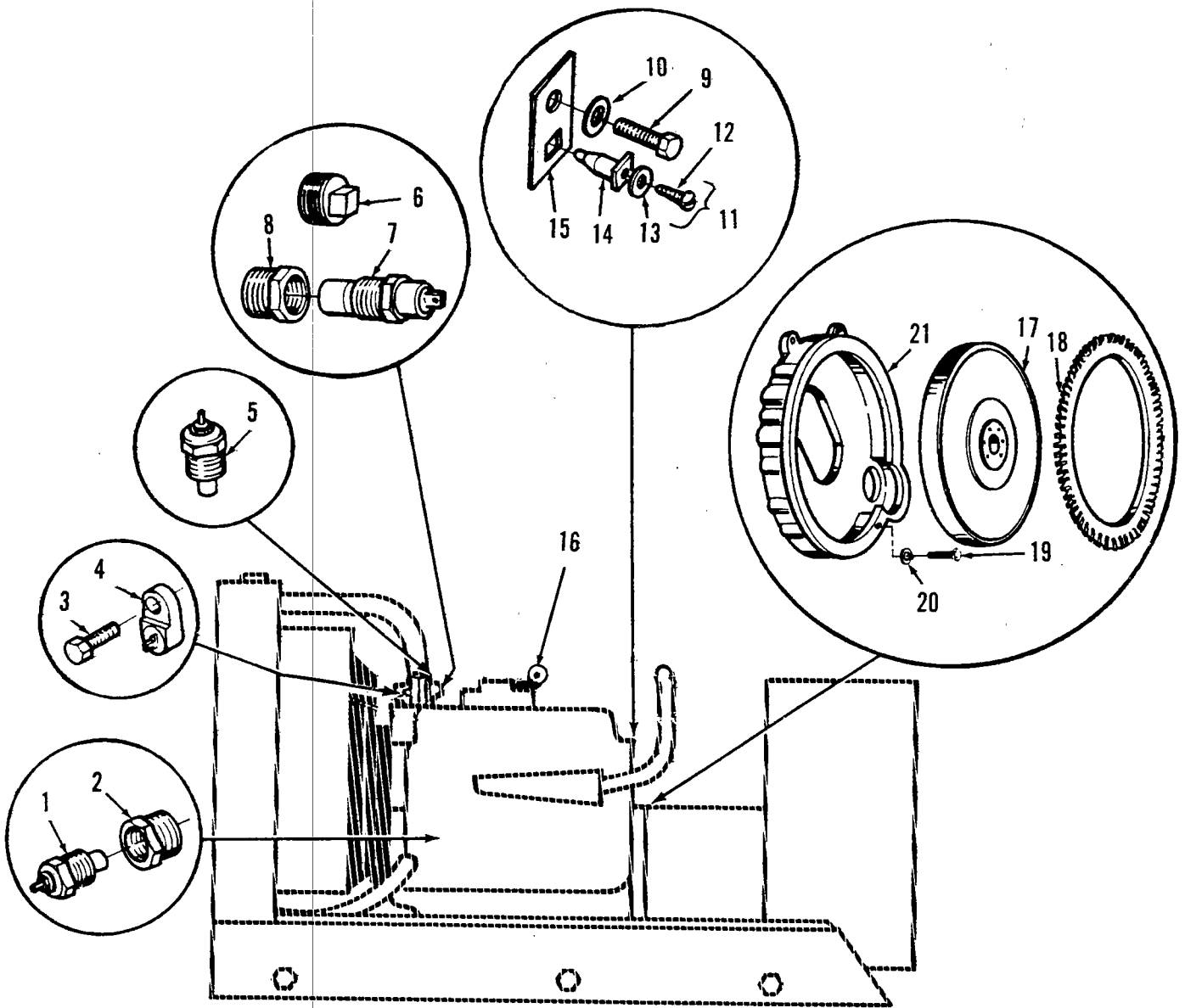
Engine Components - Left Side



Engine Components - Left Side

Ref. No.	Part No.	Qty. Used	Part Description
1	338-0942	1	Harness, Wiring - Engine
2			Sender, Temperature - Engine Coolant (E2)
	193-0104	1	Spec A
	193-0247	1	Begin Spec B
3	812-0075	1	Screw, Machine - Round Head (#8-32 x 1/4")
4	191-0773	1	Shield - Starter Mounting
5			Sender, Pressure - Oil (E1)
	193-0108	1	Spec A
	193-0244	1	Begin Spec B
6	502-0058	1	Tee, Pipe - Street, Brass (1/8 NPT)
7	309-0064	1	Switch, Pressure - Low Oil (S1)
8	505-0059	1	Tee, Pipe (1/8 NPT)
9	309-0169	1	Switch, Pressure - Low Oil, Pre-Alarm (S6)
10	505-0763	1	Cross, Pipe (1/8 NPT)
11			Nipple, Pipe
	505-0104	1	1/8 NPT x 1-1/2"
	505-0061	1	1/8 NPT x 2"
12	505-0007	1	Bushing, Reducer - Hex (1/4 NPT x 1/8 NPT)
13	821-0010	2	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
14	336-3124	1	Lead, Electrical (#2 AWG x 9"LG)
15			Cable, Battery
	416-0021	1	Positive (21"LG)
	416-0672	1	Negative (29"LG)
16	800-0005	2	Screw, Cap - Hex Head (1/4-20 x 3/4")
17	850-0040	2	Washer, Lock - Spring (1/4")
18	862-0001	2	Nut, Hex (1/4-20)
19	307-1031	1	Solenoid, Electrical - Start, 12 VDC (K6)

Engine Components - Right Side



Engine Components - Right Side

Ref. No.	Part No.	Qty. Used	Part Description
1			Sender, Temperature - Oil (E5)
	193-0202	1	Spec A
	193-0249	1	Begin Spec B
2	505-0007	1	Bushing, Reducer - Hex (1/4 NPT x 1/8 NPT)
3	800-0069	1	Screw, Cap - Hex Head (7/16-14 x 3/4")
4	309-0269	1	Switch, Thermostatic - Low Engine Temp (S5)
5	309-0179	1	Switch, Thermostatic - Hi Eng Coolant Temp (S2)
6	505-0130	1	Plug, Pipe - Square Head (3/4 NPT)
7	309-0178	1	Switch, Thermostatic - Hi Eng Coolant Temp (S7)
8	505-0499	1	Bushing, Reducer - Hex (3/4 NPT x 3/8 NPT)
9	800-0026	1	Screw, Cap - Hex Head (5/16-18 x 3/4")
10	853-0016	1	Washer, Lock - EIT (5/16")
11	332-1292	1	Terminal Board (Includes parts marked *)
12	809-0035	1	*Screw, Thread Cutting - Round Head (#8 x 3/4")
13	508-0015	1	*Washer, Insulating - Fiber (#8)
14	870-0196	1	*Nut, Insulating (#8)
15	332-1281	1	*Plate, Mounting - Terminal
16	166-0278	1	Coil, Ignition (T1)
17			Flywheel (Includes Ring Gear)
	104-0925	1	Spec A thru C
	104-1097	1	Begin Spec D
18	104-0723	1	Gear, Ring
19	800-0072	8	Screw, Cap - Hex Head (7/16-14 x 1-1/4")
20	850-0055	8	Washer, Lock - Spring (7/16")
21			Adapter - Generator to Engine
	231-0205	1	Standard
	231-0260	1	With Mag Pickup Tapped Hole

* - Parts included in Terminal Board.

This diagram shows an exploded view of a mechanical assembly. The components are numbered as follows:

- 1**: A large U-shaped bracket or frame.
- 2**: A small screw or pin.
- 3**: A small washer or spacer.
- 4**: A small pin or clip.
- 5**: A long screw or bolt.
- 6**: A curved metal arm or lever.
- 7**: A small pin or clip.
- 8**: A motor or actuator unit with a gear.
- 9**: A small nut or washer.
- 10**: A small pin or clip.
- 11**: A small pin or clip.
- 12**: A small pin or clip.
- 13**: A small cylindrical component, possibly a sensor or switch.
- 14**: A pulley or wheel.
- 15**: A long screw or bolt.
- 16**: A small pin or clip.
- 17**: A small pin or clip.
- 18**: A large metal plate or bracket.
- 19**: A small metal plate or bracket.

The diagram illustrates the assembly sequence and relative positions of these parts. Dashed lines indicate the alignment and assembly path for several components, such as the screws (2, 3, 4, 5, 15) and pins (7, 10, 11, 12, 16, 17).

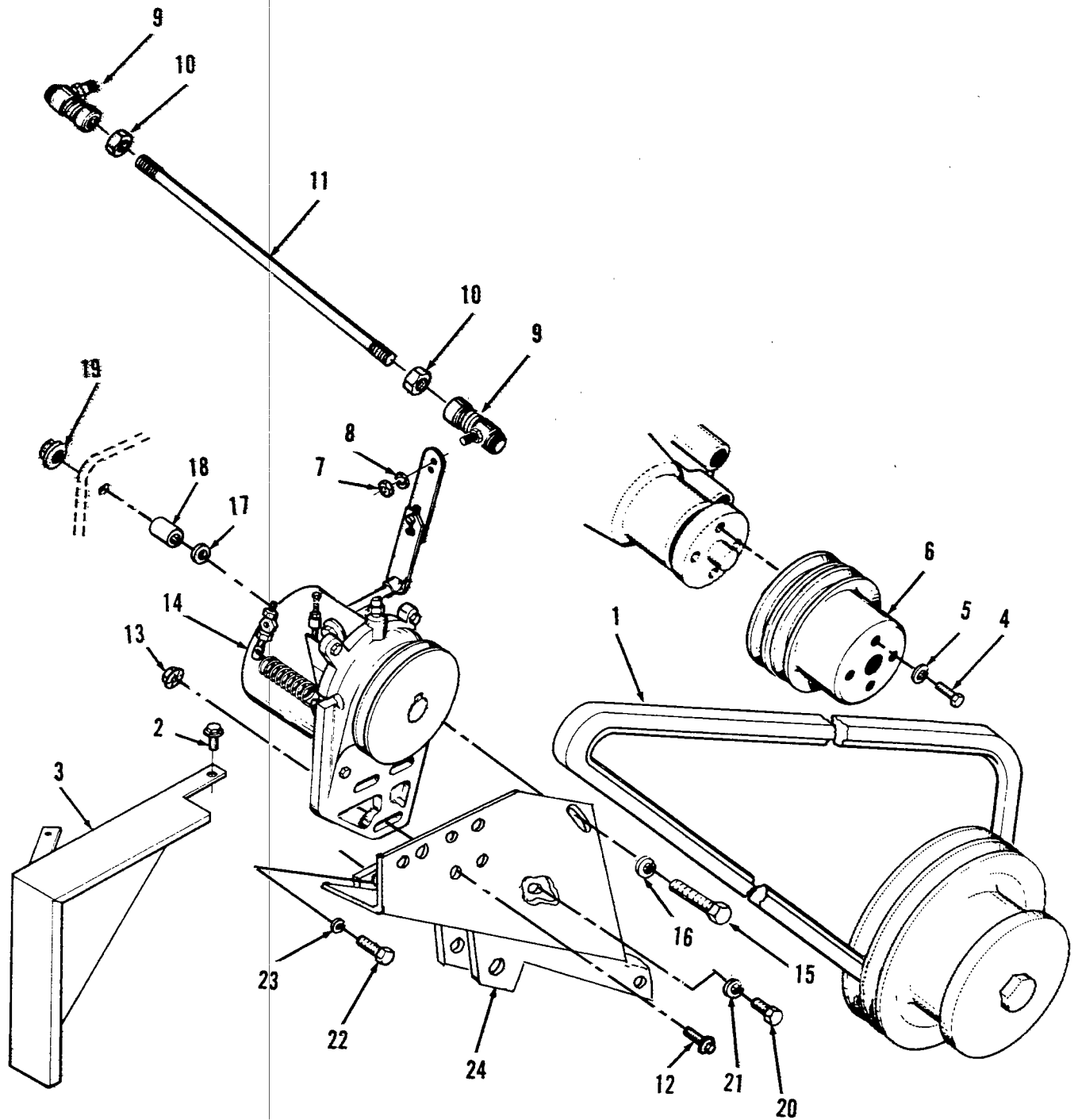
Alternator

Ref. No.	Part No.	Qty. Used	Part Description
1			Belt, Drive
	511-0098	1	Spec A
	511-0084	1	Begin Spec B
2	800-0027	1	Screw, Cap - Hex Head (5/16-18 x 7/8")
3	850-0045	1	Washer, Lock - Spring (5/16")
4	526-0115	1	Washer, Flat (11/32"ID x 11/16"OD x 1/16"THK)
5	800-0095	1	Screw, Cap - Hex Head (1/2-13 x 2-1/2")
6	850-0065	1	Washer, Lock - Spring (1/2")
7	862-0005	1	Nut, Hex (1/2-13)
8	191-1388	1	Alternator - 12 VDC (Includes Parts Marked *)
9	868-0007	1	Nut, Hex (5/16-18)
10	850-0070	1	Washer, Lock - Spring (5/8")
11	515-0093	1	Key, Woodruff (#5)
12	191-1390	1	* Regulator, Voltage (Includes Parts Marked #)
13	312-0201	1	*# Capacitor
14	191-1099	1	Pulley
15	800-0029	1	Screw, Cap - Hex Head (5/16-18 x 1-1/8")
16	850-0045	1	Washer, Lock - Spring (5/16")
17	191-0864	1	Spacer
18	862-0015	1	Nut, Hex (5/16-18)
19			Arm, Adjusting
	191-0535	1	Spec A
	191-1203	1	Begin Spec B

* - Parts Included with Alternator.

- Parts Included with Voltage Regulator

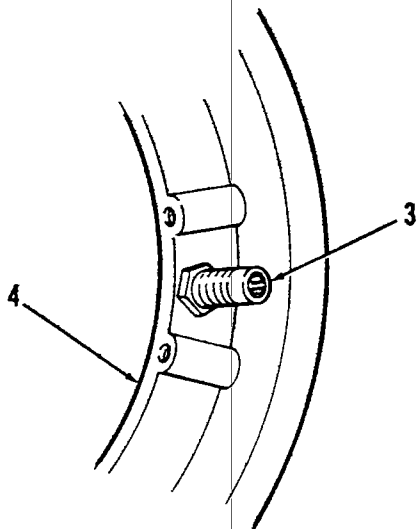
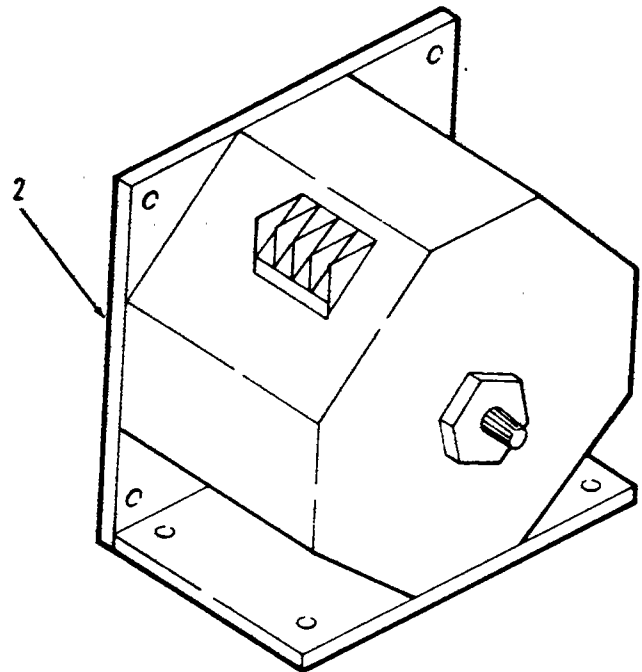
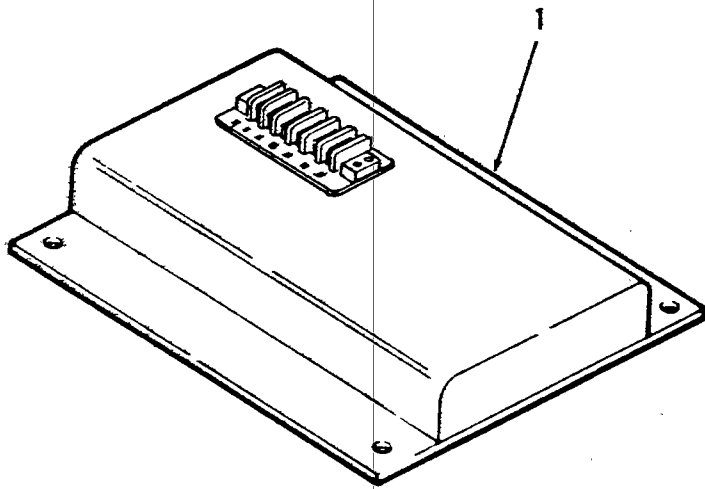
Governor - Mechanical



Governor - Mechanical

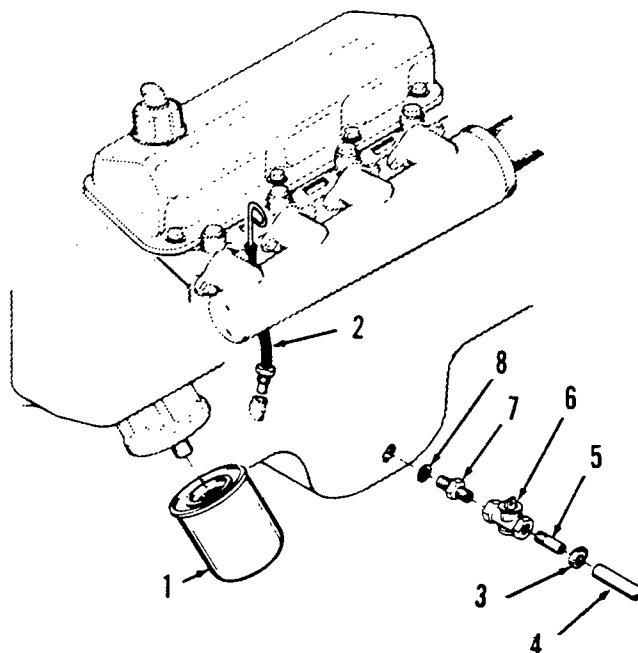
Ref. No.	Part No.	Qty. Used	Part Description
1			Belt, Drive
	511-0098	1	Spec A
	511-0084	1	Begin Spec B
2	821-0010	3	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
3	130-0991	1	Guard, Belt
4	801-0027	4	Screw, Cap - Hex Head (5/16-24 x 7/8")
5	850-0045	4	Washer, Lock - Spring (5/16")
6	132-0168	1	Pulley - Water Pump Drive
7	115-0025	2	Nut, Hex (1/4-28)
8	850-0040	2	Washer, Lock - Spring (1/4")
9	150-0638	2	Joint, Ball
10	115-0025	2	Nut, Hex (1/4-28)
11	520-0855	1	Stud (1/4-28 x 14-1/2"LG)
12	821-0030	3	Screw, Self-locking - Hex Washer Head (3/8-16 x 1")
13	870-0281	3	Nut, Self-locking - Hex Washer Head (3/8-16)
14	151-0415	1	Governor
15	800-0052	1	Screw, Cap - Hex Head (3/8-16 x 1-1/2")
16	850-0050	1	Washer, Lock - Spring (3/8")
17	526-0026	2	Washer, Flat (13/32"ID x 3/4"OD x 1/16"THK)
18	130-0988	1	Spacer, Sleeve
19	870-0281	1	Nut, Self-locking - Hex Washer Head (3/8-16)
20	800-0048	1	Screw, Cap - Hex Head (3/8-16 x 3/4")
21	850-0050	1	Washer, Lock - Spring (3/8")
22	800-0069	1	Screw, Cap - Hex Head (7/16-14 x 3/4")
23	850-0055	1	Washer, Lock - Spring (7/16")
24	150-1521	1	Bracket, Mounting

Governor - Electronic



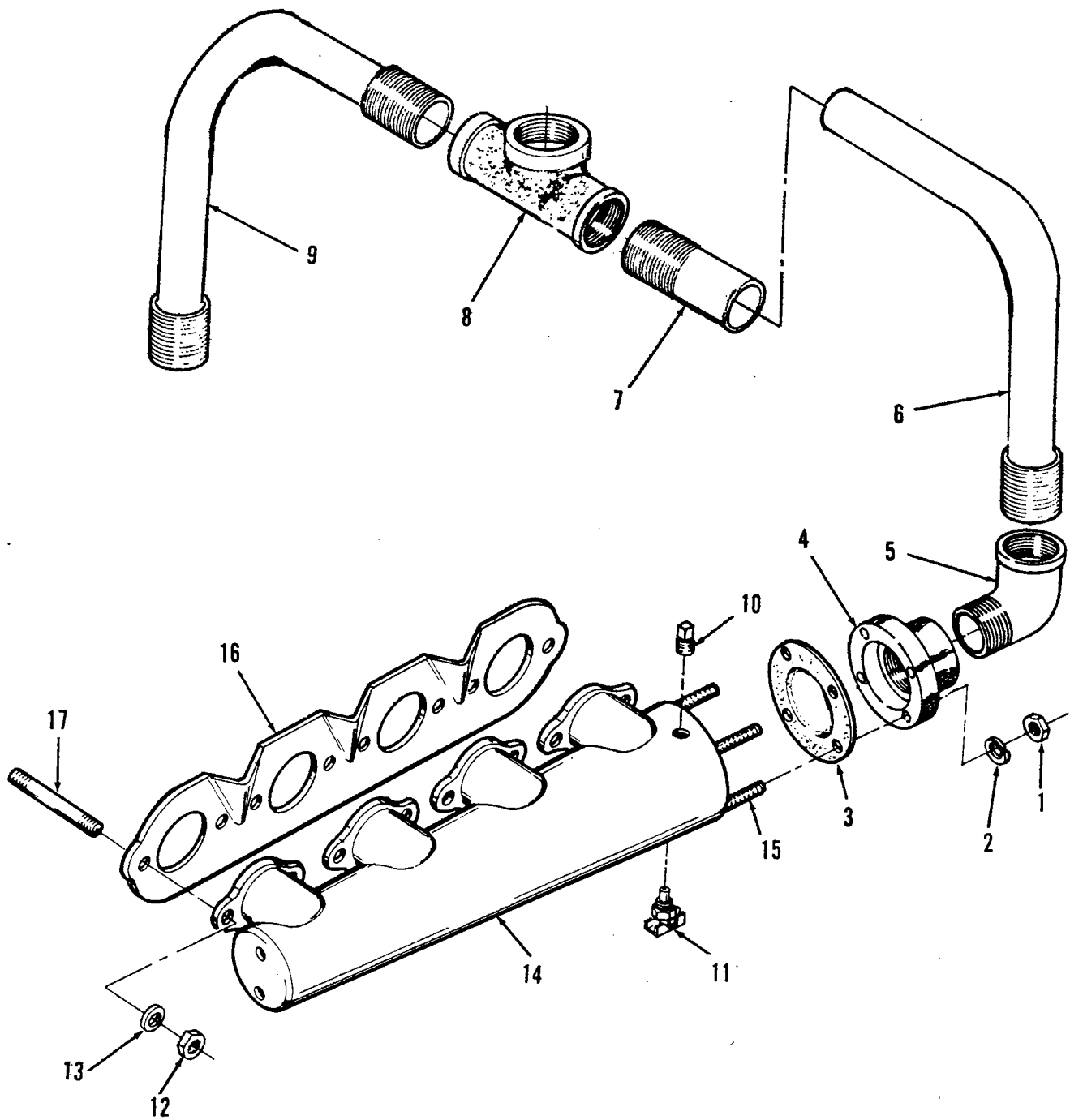
Ref. No.	Part No.	Qty. Used	Part Description
1	150-1880	1	Control Unit - 12 VDC
2	151-0566	1	Actuator - 12 VDC
3	151-0411	1	Pickup, Magnetic
4	231-0260	1	Adapter, Engine to Generator

Oil System Components



Ref. No.	Part No.	Qty. Used	Part Description
1	122-0193	1	Filter, Oil
2	123-1322	1	Tube - Oil Level Indicator
3			Clamp, Hose
	503-0131	1	Thru May 1985
	503-0197	1	Begin June 1985
4			Hose, Rubber
	503-0966	1	(5/8"ID) Thru May 1985
	503-0200	1	(3/4"ID) Begin June 1985
5			Nipple, Pipe - Half
	505-0135	1	(3/8 NPT x 1-1/2") Thru May 1985
	505-0185	1	(1/2 NPT x 1-1/2") Begin June 1985
6			Valve, Cock
	504-0030	1	(3/8 NPT) Thru May 1985
	504-0011	1	(1/2 NPT) Begin June 1985
7			Adapter, Pipe - Hex
	102-0652	1	(1/2-20 UNF x 3/8 NPT) Thru May 1985
	102-1054	1	(M14 x 1/2 NPT)
8			Gasket
	102-0664	1	Thru May 1985
	102-1281	1	Begin June 1985

Exhaust System Components

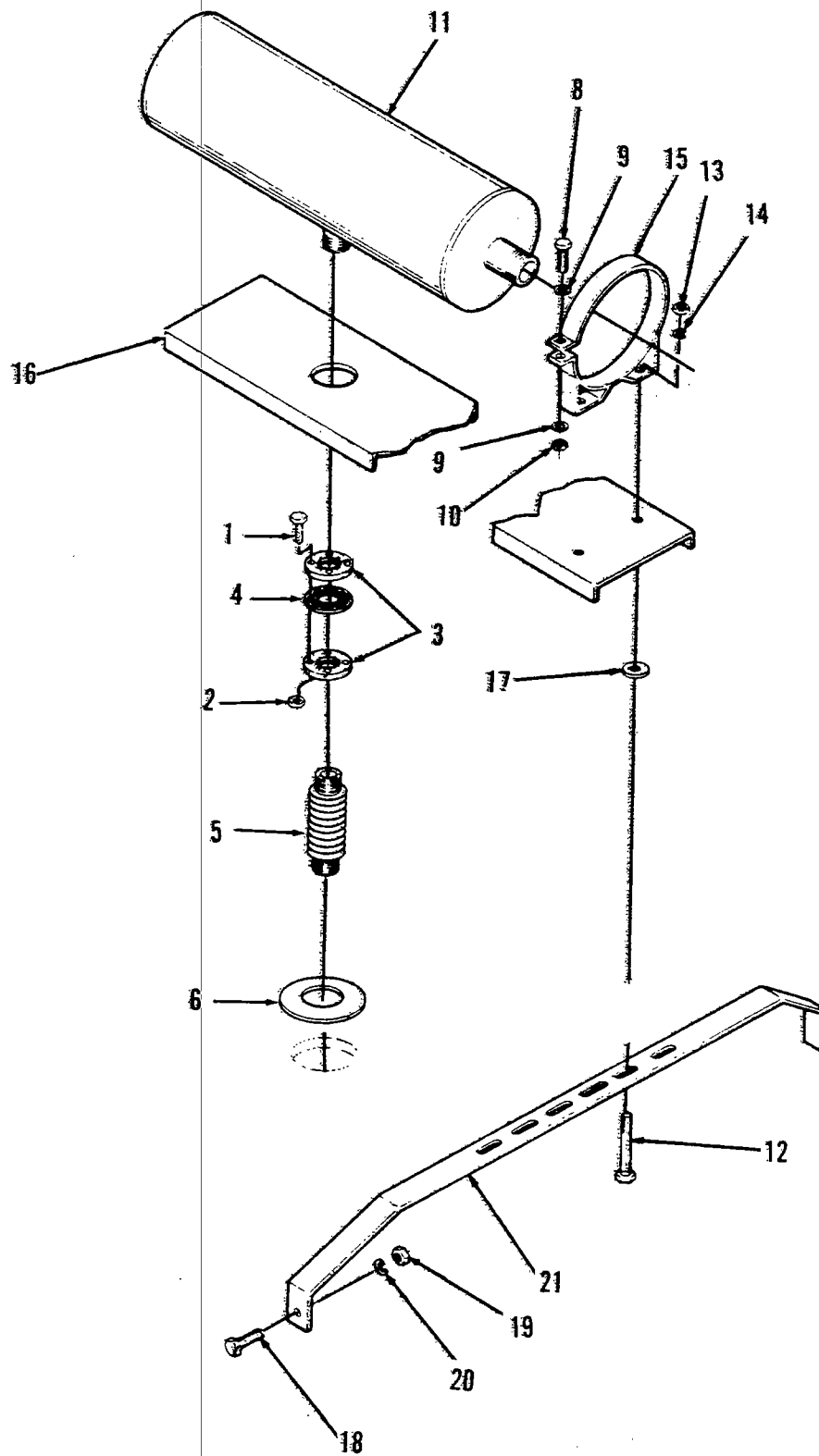


Exhaust System Components

Ref. No.	Part No.	Qty. Used	Part Description
1	870-0195	8	Nut, Self-locking - Hex (5/16-24)
2	850-0165	8	Washer, Lock - Spring - SST (5/16")
3	154-2336	2	Gasket
4	154-1739	2	Flange, Pipe
5	505-0216	2	Elbow, Pipe - Street, 90 DEG (2-1/2 NPT)
6	155-1373	1	Tube, Exhaust
7	155-0615	1	Nipple, Pipe - Half
8	505-0373	1	Tee, Pipe - Reducing (2-1/2 NPT x 2-1/2 NPT x 3 NPT)
9	155-1372	1	Tube, Exhaust
10	505-0057	2	Plug, Pipe - Square Head (1/8 NPT)
11	504-0005	2	Cock, Drain (1/8 NPT)
12	870-0195	16	Nut, Hex (3/8-24)
13	526-0188	16	Washer, Flat - SST (3/8" Nominal)
14	154-1766	2	Manifold, Exhaust - Liquid Cooled (Includes parts marked *)
15	520-0165	8	*Stud (5/16-24 x 5/16-18 x 1-7/8"LG)
16	155-1395	2	Gasket
17	520-0819	16	Stud (3/8-24 x 3/8-16 x 1-7/8"LG)

* - Parts included with Exhaust Manifold.

Exhaust System - Industrial
Spec A Only



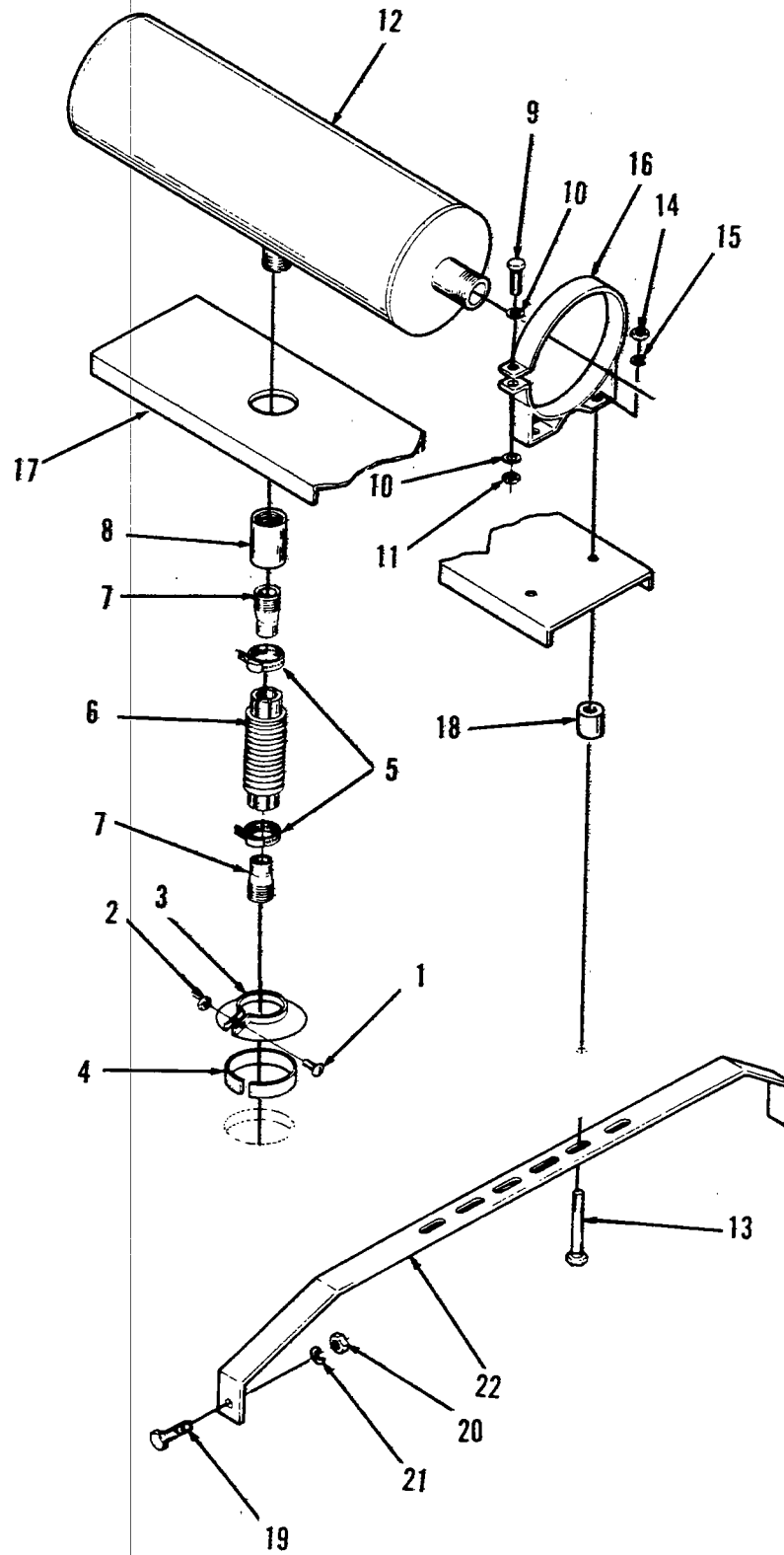
Exhaust System - Industrial Spec A Only

Ref. No.	Part No.	Qty. Used	Part Description
1	800-0138	4	*Screw, Cap - Hex Head (5/8-11 x 3")
2	862-0007	4	*Nut, Hex (5/8-11)
3	154-0570	1	Package, Flange Companion (Includes parts marked *)
4	#	1	*Gasket
5	155-1390	1	Tube, Exhaust - Flexible (3 NPT x 15-1/4"LG)
6	155-1387	1	Shield, Rain
8	800-0035	2	Screw, Cap - Hex Head (5/16-18 x 2-1/2")
9	526-0113	4	Washer, Flat (11/32"ID x 1"OD x 3/32"THK)
10	870-0257	2	Nut, Self-locking - Hex Washer Head (5/16-18)
11	155-0989	1	Muffler, Exhaust - Industrial (14"OD x 50"LG)
12	800-0026	4	Screw, Cap - Hex Head (5/16-18 x 3/4")
13	862-0015	4	Nut, Hex (5/16-18)
14	850-0045	4	Washer, Lock - Spring (5/16")
15	140-0757	2	Band, Mounting (14"ID)
16	155-0997	1	Shield, Heat (12"W x 46"LG)
17	526-0172	4	Washer, Flat (1/2"ID x 2-1/2"OD x 1/4"THK)
18	800-0028	4	Screw, Cap - Hex Head (5/16-18 x 1")
19	862-0015	4	Nut, Hex (5/16-18)
20	850-0045	4	Washer, Lock - Spring (5/16")
21	155-0789	2	Bracket, Support - Muffler Mounting

* - Parts included in Companion Flange Package.
- Part number not available at time of printing.

Exhaust System - Industrial

Begin Spec B

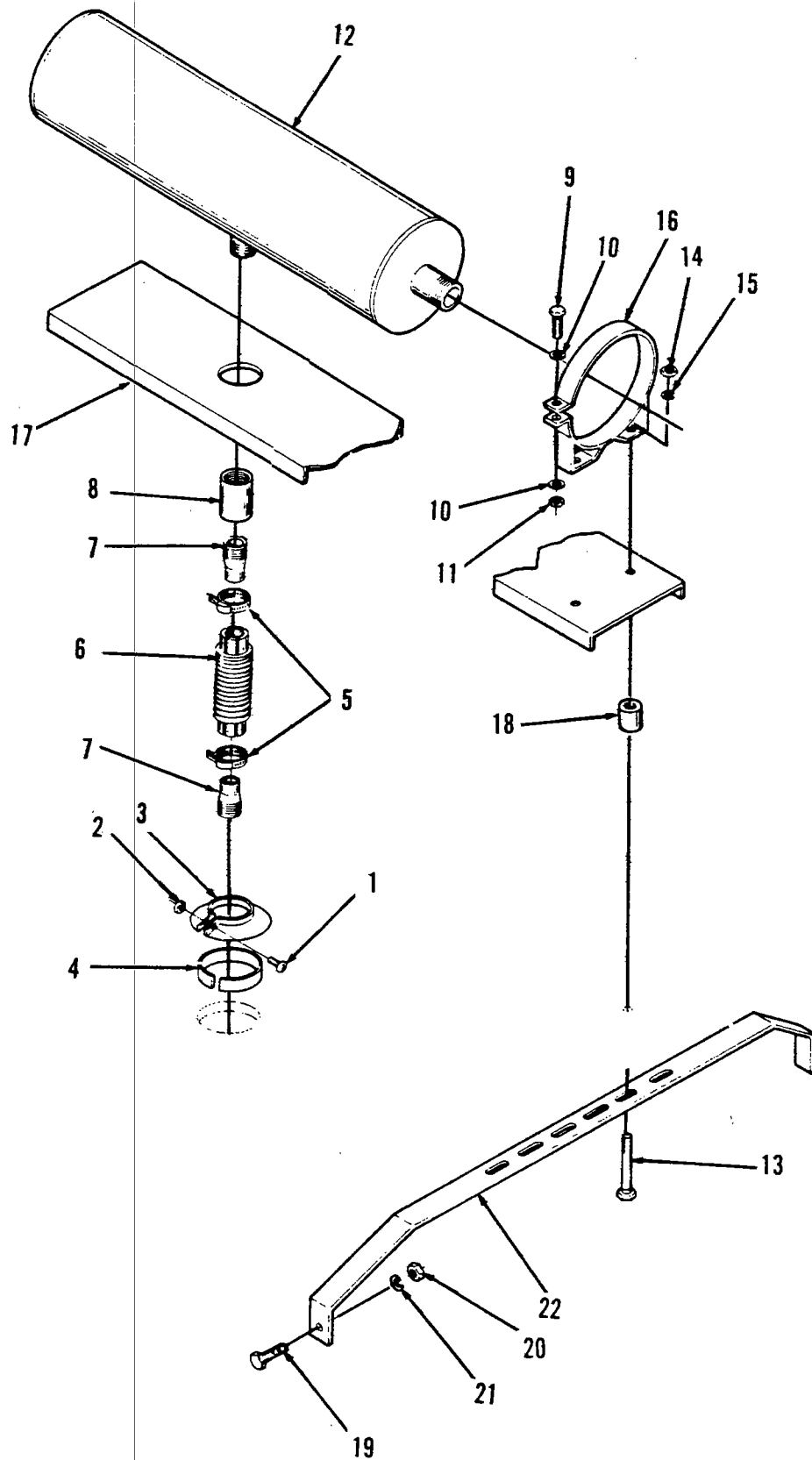


Exhaust System - Industrial

Begin Spec B

Ref. No.	Part No.	Qty. Used	Part Description
1	813-0105	2	Screw, Machine - Round Head (#10-32 x 1")
2	870-0188	2	Nut, Self-locking - Hex (#10-32)
3	155-1422	1	Shield, Rain
4	895-0159	1	Strip, Asbestos (2"W x 1/16"THK x 12"LG)
5	503-0591	2	Clamp, Hose
6	155-1489	1	Tube, Exhaust - Flexible, SST (3" x 9")
7	155-1463	2	Connector, Tube - Exhaust (3 NPT)
8	505-0327	1	Coupling, Pipe (3 NPT)
9	800-0035	2	Screw, Cap - Hex Head (5/16-18 x 2-1/2")
10	526-0113	4	Washer, Flat (11/32"ID x 1"OD x 3/32"THK)
11	870-0257	2	Nut, Self-locking - Hex Washer Head (6/16-18)
12	155-0989	1	Muffler, Exhaust - Industrial (14"OD x 50"LG)
13	800-0037	4	Screw, Cap - Hex Head (5/16-18 x 3")
14	870-0048	4	Nut, Self-locking - Hex Washer Head (5/16-18)
15	850-0045	4	Washer, Lock - Spring (5/16")
16	140-0757	2	Band, Mounting (14"ID)
17	155-0997	1	Shield, Heat (12"W x 46"LG)
18	155-1430	4	Spacer (1/2"ID x 1-1/2"OD x 2"THK)
19	800-0026	4	Screw, Cap - Hex Head (5/16-18 x 3/4")
20	870-0048	4	Nut, Self-locking - Hex Washer Head (5/16-18)
21	850-0045	4	Washer, Lock - Spring (5/16")
22	155-0789	2	Bracket, Support - Muffler Mounting

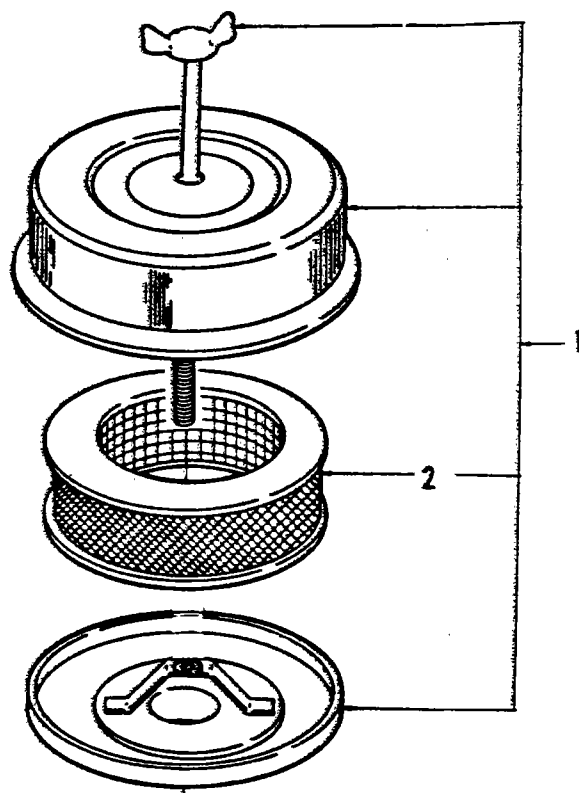
Exhaust System - Critical



Exhaust System - Critical

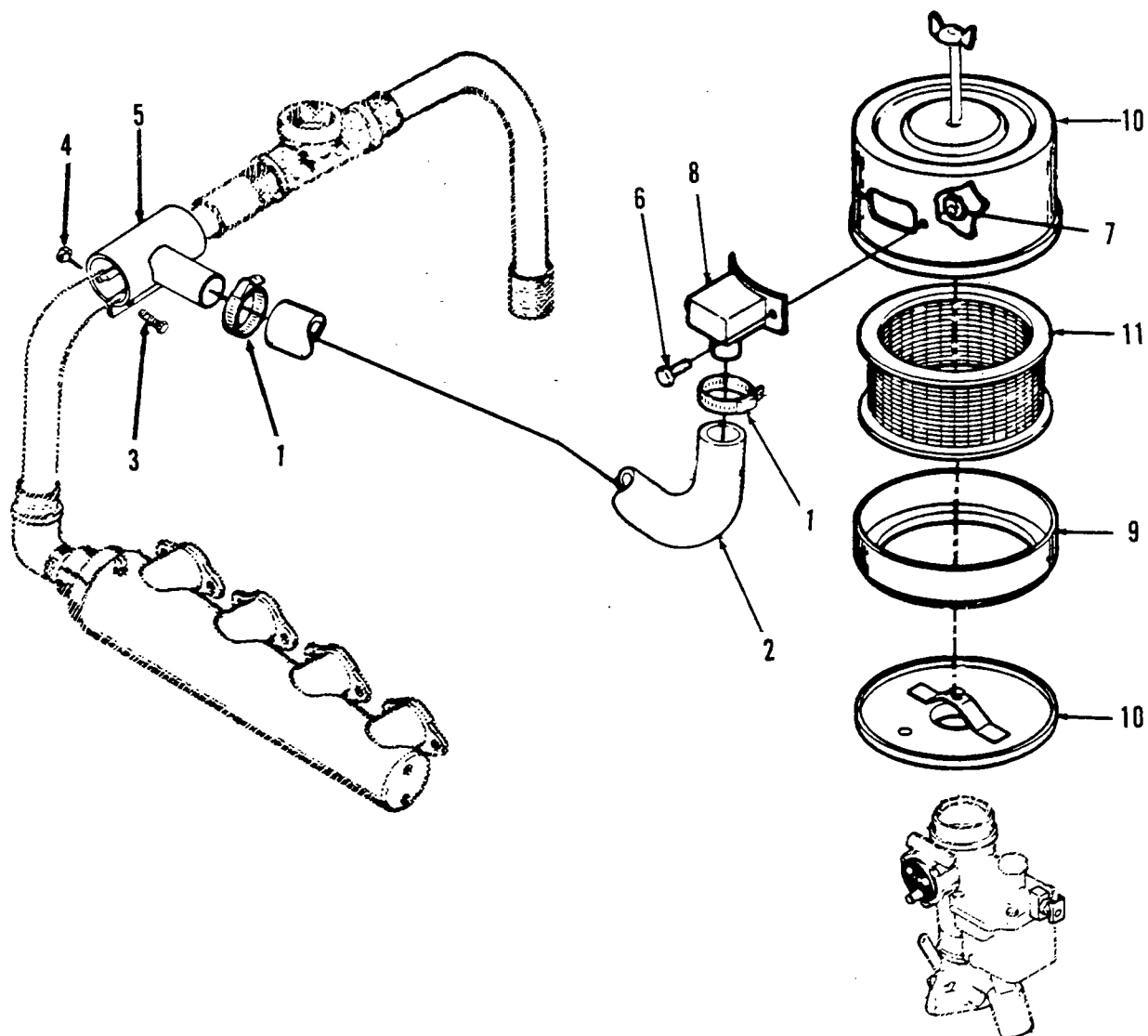
Ref. No.	Part No.	Qty. Used	Part Description
1	813-0105	2	Screw, Machine - Round Head (#10-32 x 1")
2	870-0188	2	Nut, Self-locking - Hex (#10-32)
3	155-1422	1	Shield, Rain
4	895-0159	1	Strip, Asbestos (2"W x 1/16"THK x 12"LG)
5	503-0591	2	Clamp, Hose
6	155-1489	1	Tube, Exhaust - Flexible, SST (3" x 9")
7	155-1463	2	Connector, Tube - Exhaust (3 NPT)
8	505-0327	1	Coupling, Pipe (3 NPT)
9	800-0035	2	Screw, Cap - Hex Head (5/16-18 x 2-1/2")
10	526-0113	4	Washer, Flat (11/32"ID x 1"OD x 3/32"THK)
11	870-0257	2	Nut, Self-locking - Hex Washer Head (6/16-18)
12	155-1618	1	Muffler, Exhaust - Critical (14"OD x 62"LG)
13	800-0037	6	Screw, Cap - Hex Head (5/16-18 x 3")
14	870-0048	6	Nut, Self-locking - Hex Washer Head (5/16-18)
15	850-0045	6	Washer, Lock - Spring (5/16")
16	140-0757	3	Band, Mounting (14"ID)
17	155-1663	1	Shield, Heat (12"W x 58"LG)
18	155-1430	6	Spacer (1/2"ID x 1-1/2"OD x 2"THK)
19	800-0026	6	Screw, Cap - Hex Head (5/16-18 x 3/4")
20	870-0048	6	Nut, Self-locking - Hex Washer Head (5/16-18)
21	850-0045	6	Washer, Lock - Spring (5/16")
22	155-0789	3	Bracket, Support - Muffler Mounting

Air Cleaner



Ref. No.	Part No.	Qty. Used	Part Description
1	140-1083	1	Cleaner , Air (Includes Element)
2	140-1089	1	Element - Air Cleaner

Air Heater



Ref. No.	Part No.	Qty. Used	Part Description
1	503-0274	1	Clamp, Hose
2	503-0593	1	Hose, Rubber (2"ID x 8"LG)
3	821-0011	1	Screw, Self-locking - Hex Washer Head (1/4-20 x 7/8")
4	870-0212	1	Nut, Self-locking - Hex Washer head (1/4-20)
5	140-1402	1	Plenum (Jacket)- Air Heater
6	821-0008	2	Screw, Self-locking - Hex Washer Head (1/4-20 x 5/16")
7	870-0212	2	Nut, Self-locking - Hex Washer Head (1/4-20)
8	140-1431	1	Inlet - Air Heater
9	140-1401	1	Retainer, Heat
10	140-1400	1	Cleaner, Air (Includes Element)
11	140-1089	1	Element - Air Cleaner

Figure 1. The effect of the concentration of the H_2O_2 solution on the amount of the released H_2O from the H_2O_2 -loaded hydrogel. The amount of the released H_2O was measured by the weight difference of the hydrogel before and after the release. The concentration of the H_2O_2 solution was 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 wt. %.

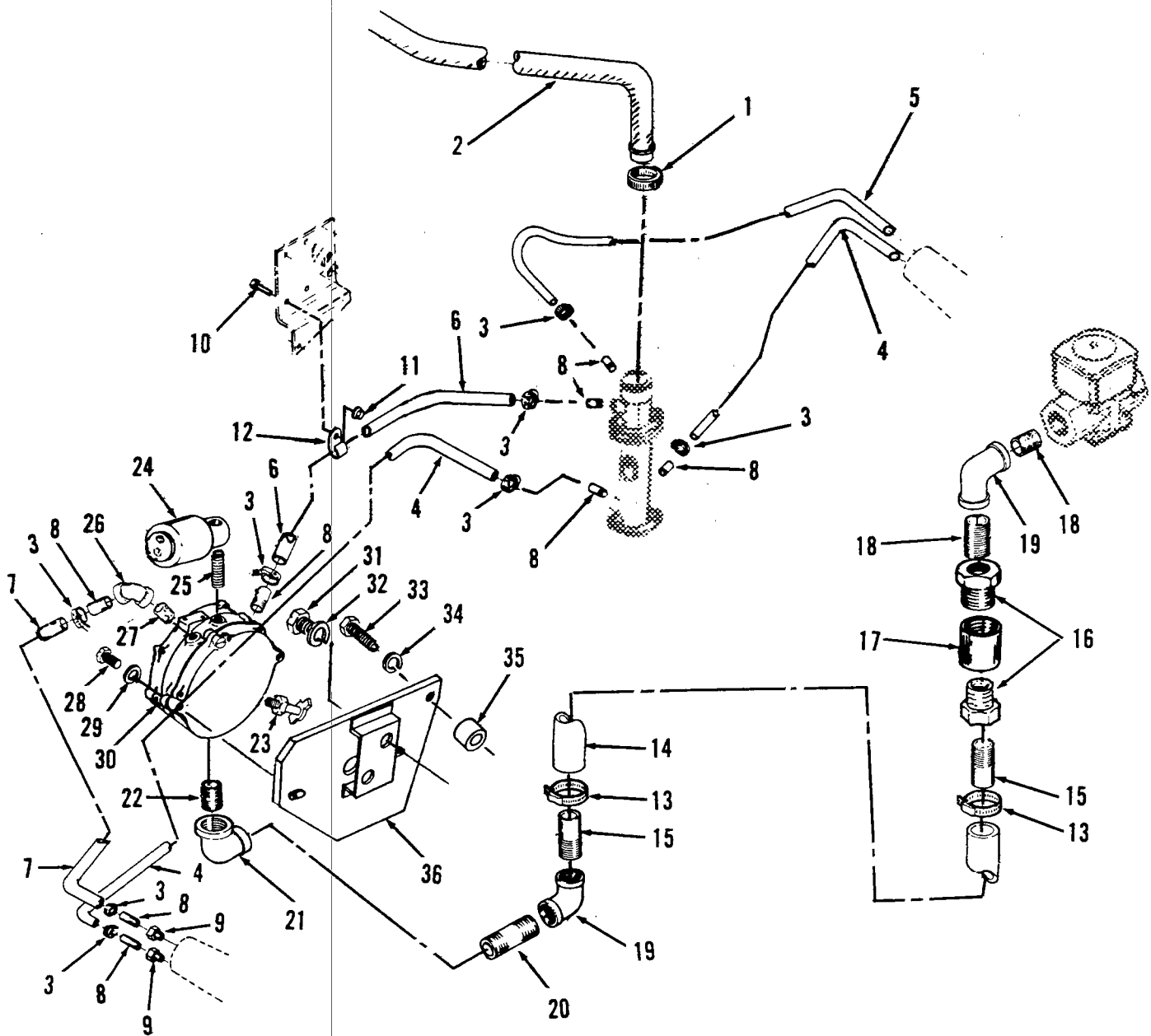


Fuel System - Gasoline

Ref. No.	Part No.	Qty. Used	Part Description
1	501-0005	1	Line, Fuel - Flexible
2	501-0066	1	Line, Fuel - Flexible
3	502-0002	1	Elbow, Line - 90 DEG (1/8 NPT x 1/4 Line)
4	502-0041	2	Elbow, Line - 90 DEG (1/4 NPT x 1/4 Line)
5	503-0547	1	Clamp, Hose
6	503-1100	1	Hose, Rubber (1/2"ID x 23"LG)
7	502-0237	1	Adapter, Pipe to Hose - 90 DEG
8	870-0281	2	Nut, Self-locking - Hex Washer Head (3/8-16)
9	141-0902	1	Carburetor, Gasoline (Includes Parts Marked *)
10	141-0911	1	* Cover, Choke with Heater - 12 VDC
11	141-0850	1	* Solenoid, Fuel Cutoff - 12 VDC
12	141-0852	1	* Gasket
13	520-0311	2	Stud (3/8-16 x 1-5/8"LG)
14	110-0445	4	Nut, Hex (5/16-24)
15	526-0065	4	Washer, Flat (21/64"ID x 9/16"OD x 1/16"THK)
16	145-0482	1	Adapter, Carburetor
17	520-0011	4	Stud (5/16-18 x 5/16-24 x 1-7/8"LG)
18	114-0022	2	Screw, Cap - Hex Head (5/16-18 x 1-3/4")
19	850-0045	2	Washer, Lock - Spring (5/16")
20	149-1437	1	Pump, Fuel
21	149-1436	1	Gasket
22	332-1554	1	Clamp, Loop

* - Parts Included with Carburetor.

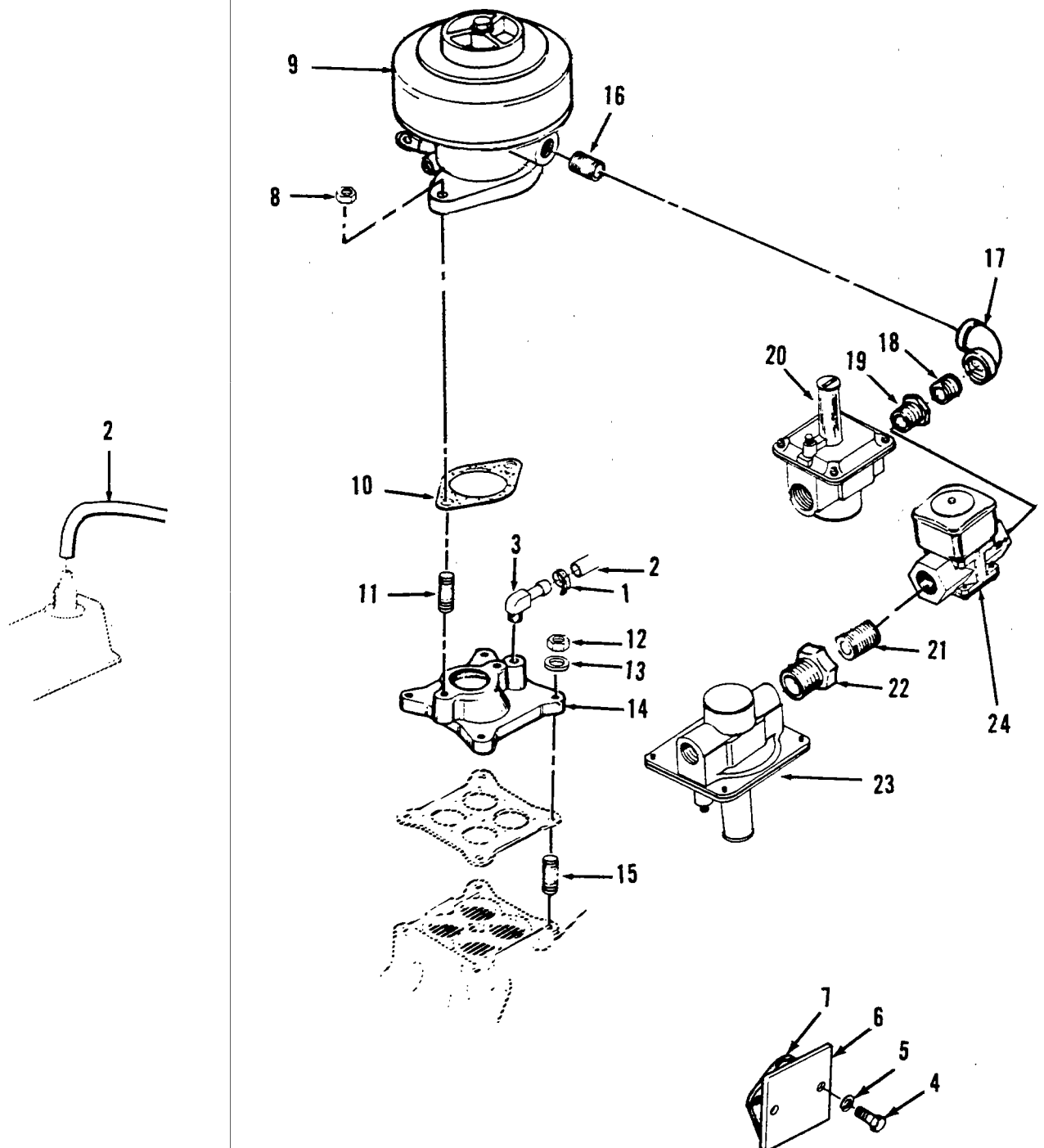
Gas Conversion System (LPG Liquid to Vapor)



Gas Conversion System
(LPG Liquid to Vapor)

Ref. No.	Part No.	Qty. Used	Part Description
1	503-0365	1	Clamp, Hose
2	503-0753	1	Hose, Radiator - Upper
3	503-0183	10	Clamp, Hose
4	503-0833	2	Hose, Rubber (5/8"ID x 24"LG)
5	503-1168	1	Hose, Rubber (5/8"ID x 36"LG)
6	503-0800	1	Hose, Rubber (5/8"ID x 19"LG)
7	503-0261	1	Hose, Rubber (5/8"ID x 8-1/2"LG)
8	505-0135	10	Nipple, Pipe - Half (3/8 NPT x 1-1/2")
9	505-0019	4	Bushing, Reducer - Hex (1/2 NPT x 3/8 NPT)
10	800-0051	1	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
11	870-0133	1	Nut, Self-locking - Hex Washer Head (3/8-16)
12	148-0274	2	Clamp, Loop
13	503-0398	2	Clamp, Hose
14	503-0799	1	Hose, Rubber (1"ID x 1-3/8"OD x 30"LG)
15	505-0324	2	Nipple, Pipe - Half (3/4 NPT x 2")
16	505-0129	2	Bushing, Reducer - Hex (1 NPT x 3/4 NPT)
17	505-0030	1	Coupling, Pipe (1 NPT)
18	505-0102	2	Nipple, Pipe (3/4 NPT x 1-3/8")
19	505-0132	2	Elbow, Pipe - 90 DEG (3/4 NPT)
20	505-0084	1	Nipple, Pipe (3/4 NPT x 2-1/2")
21	505-0356	1	Elbow, Pipe - Reducing (1 NPT x 3/4 NPT)
22	505-0004	1	Nipple, Pipe (1 NPT x 1-1/2")
23	504-0005	1	Cock, Drain (1/8 NPT)
24	307-0268	1	Valve, Solenoid - 12 VDC (1/4 NPT)
25	505-0099	1	Nipple, Pipe (1/4 NPT x 7/8")
26	505-0039	1	Elbow, Pipe - 90 DEG (3/8 NPT)
27	505-0101	1	Nipple, Pipe (3/8 NPT x 1")
28	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")
29	850-0040	2	Washer, Lock - Spring (1/4")
30	148-0625	1	Converter, Gas - LPG
31	800-0069	2	Screw, Cap - Hex Head (7/8-14 x 3/4")
32	850-0055	2	Washer, Lock - Spring (7/8")
33	800-0051	1	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
34	850-0050	1	Washer, Lock - Spring (3/8")
35	191-0864	2	Spacer, Sleeve
36	148-0773	1	Bracket, Mounting - Converter

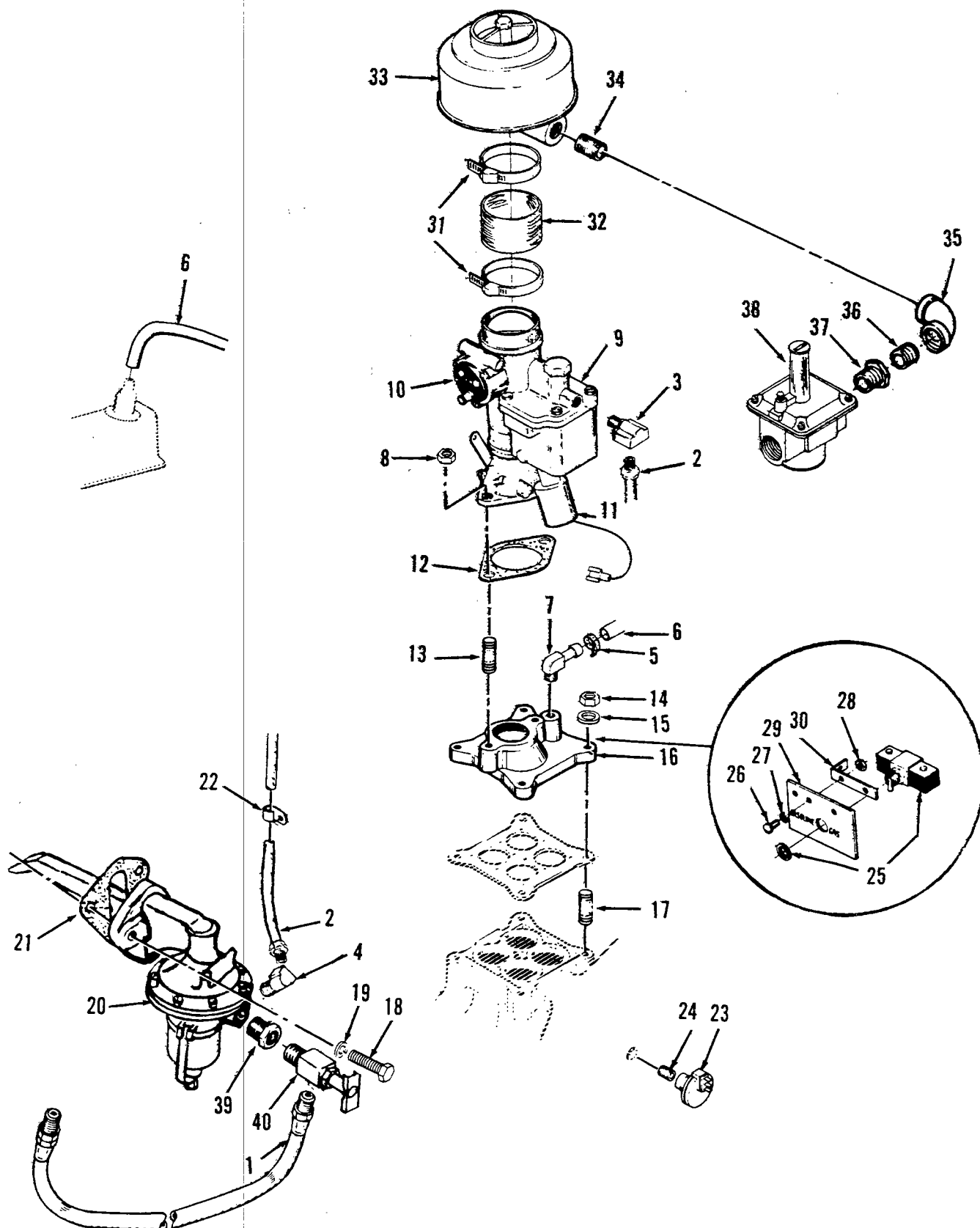
Gaseous Fuel Systems



Gaseous Fuel Systems

Ref. No.	Part No.	Qty. Used	Part Description
1	503-0547	1	Clamp, Hose
2	503-1100	1	Hose, Rubber (1/2"ID x 23"LG)
3	502-0237	1	Adapter, Pipe to Hose - 90 DEG
4	800-0025	2	Screw, Cap - Hex Head (5/16-18 x 5/8")
5	850-0045	2	Washer, Lock - Spring (5/16")
6	149-0638	1	Plate, Cover - Fuel Pump Mounting Hole
7	149-1436	1	Gasket
8	870-0281	2	Nut, Self-locking - Hex Washer Head (3/8-16)
9	148-0763	1	Carburetor, Gas Vapor
10	141-0852	1	Gasket
11	520-0311	2	Stud (3/8-16 x 1-5/8"LG)
12	110-0445	4	Nut, Hex (5/16-24)
13	526-0065	4	Washer, Flat (21/64"ID x 9/16"OD x 1/16"THK)
14	145-0482	1	Adapter, Carburetor
15	520-0011	4	Stud (5/16-18 x 5/16-24 x 1-7/8"LG)
16	505-0106	1	Nipple, Pipe (1/2 NPT x 1-1/2"LG)
17	505-0040	1	Elbow, Pipe - 90 DEG (1/2 NPT)
18	505-0100	1	Nipple, Pipe (1/2 NPT x 1-1/8"LG)
19	505-0021	1	Bushing, Reducer (3/4 NPT x 1/2 NPT)
20	148-0597	1	Regulator, Pressure - Gas (3/4 NPT) Nat Gas System
21	505-0102	1	Nipple, Pipe - Close (3/4 NPT x 1-3/8") LPG System
22	505-0129	1	Bushing, Reducer - Hex (1 NPT x 3/4 NPT) LPG System
23	148-0636	1	Regulator, Pressure - Gas (1 NPT) LPG System
24	307-0312	1	Valve, Solenoid - 3/4 NPT (12 VDC) LPG System

Dual Fuel System Gasoline/Natural Gas

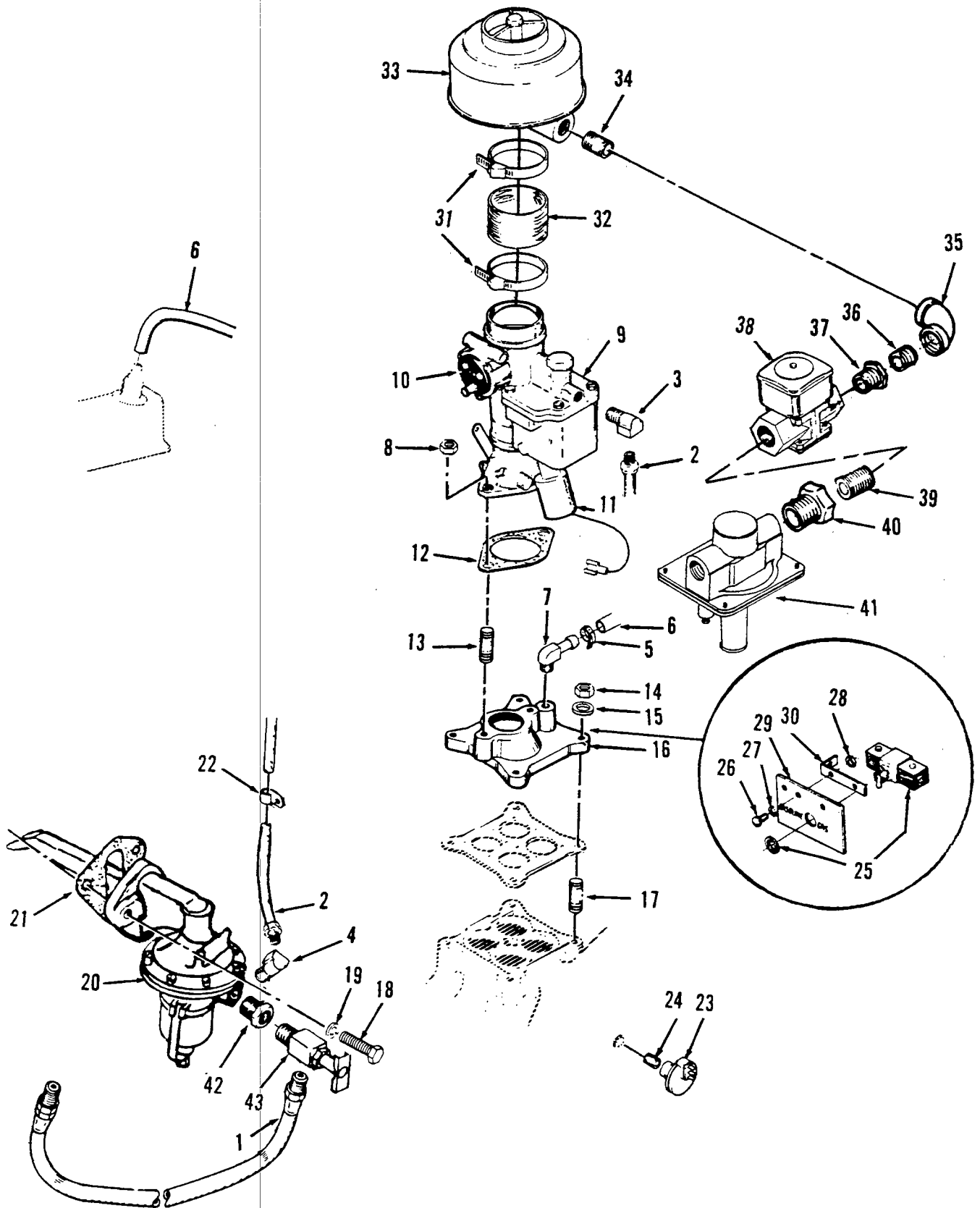


Dual Fuel System Gasoline/Natural Gas

Ref. No.	Part No.	Qty. Used	Part Description
1	501-0005	1	Line, Fuel - Flexible
2	501-0066	1	Line, Fuel - Flexible
3	502-0002	1	Elbow, Line - 90 DEG (1/8 NPT x 1/4 NPT Line)
4	502-0041	1	Elbow, Line - 90 DEG (1/4 NPT x 1/4 NPT Line)
5	503-0547	1	Clamp, Hose
6	503-1100	1	Hose, Rubber (1/2" ID x 23"LG)
7	502-0237	1	Adapter, Pipe to Hose - 90 DEG
8	870-0281	2	Nut, Self-locking - Hex Washer Head (3/8-16)
9	141-0902	1	Carburetor, Gasoline (Includes Parts Marked *)
10	141-0911	1	* Cover, Choke with Heater - 12 VDC
11	141-0850	1	* Solenoid, Fuel Cutoff - 12 VDC
12	141-0852	1	* Gasket
13	520-0311	2	Stud (3/8-16 x 1-5/8"LG)
14	110-0445	4	Nut, Hex (5/16-24)
15	526-0065	4	Washer, Flat (21/64"ID x 9/16"OD x 1/16"THK)
16	145-0482	1	Adapter, Carburetor
17	520-0011	4	Stud (5/16-18 x 5/16-24 x 1-7/8"LG)
18	114-0022	2	Screw, Cap - Hex Head (5/16-18 x 1-3/4")
19	850-0045	2	Washer, Lock - Spring (5/16")
20	149-1437	1	Pump, Fuel
21	149-1436	1	Gasket
22	332-1554	1	Clamp, Loop
23	148-0367	1	Switch, Control - Vacuum (12 VDC)
24	505-0098	1	Nipple, Pipe Close (1/8 NPT x 3/4"LG)
25	308-0005	1	Switch, Toggle
26	813-0100	2	Screw, Machine - Round Head (#10-32 x 1/2")
27	850-0030	2	Washer, Lock - Spring (#10)
28	871-0010	2	Nut, Hex (#10-32)
29	308-0150	1	Plate, Mounting - Switch
30	306-0155	1	Bracket, Mounting
31	503-0465	2	Clamp, Hose
32	503-0542	1	Hose, Rubber (1-1/4"ID x 2-1/4"LG)
33	148-0764	1	Mixer, Gas
34	505-0106	1	Nipple, Pipe (1/2 NPT x 1-1/2"LG)
35	505-0040	1	Elbow, Pipe - 90 DEG (1/2 NPT)
36	505-0100	1	Nipple, Pipe (1/2 NPT x 1-1/8"LG)
37	505-0021	1	Bushing, Reducer (3/4 NPT x 1/2 NPT)
38	148-0597	1	Regulator, Pressure - Gas (Nat. Gas) (3/4 NPT)
39	502-0029	1	Bushing, Reducer - Brass (1/4 NPT x 1/8 NPT)
40	504-0007	1	Valve, Shutoff (1/8 NPT)

* - Parts Included with Carburetor.

Dual Fuel System Gasoline/LPG Vapor

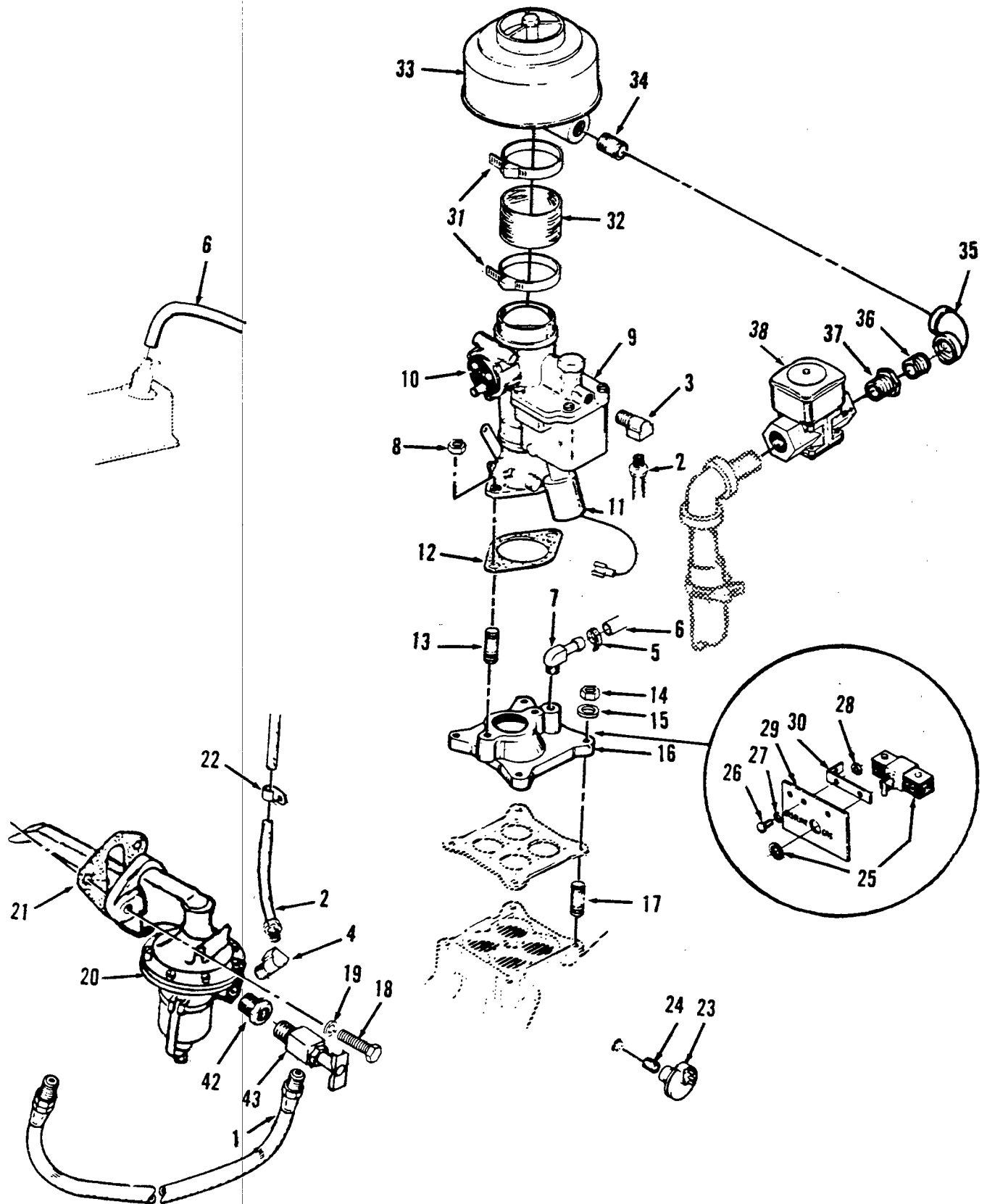


Dual Fuel System Gasoline/LPG Vapor

Ref. No.	Part No.	Qty. Used	Part Description
1	501-0005	1	Line, Fuel - Flexible
2	501-0066	1	Line, Fuel - Flexible
3	502-0002	1	Elbow, Line - 90 DEG (1/8 NPT x 1/4 NPT Line)
4	502-0041	1	Elbow, Line - 90 DEG (1/4 NPT x 1/4 NPT Line)
5	503-0547	1	Clamp, Hose
6	503-1100	1	Hose, Rubber (1/2" ID x 23"LG)
7	502-0237	1	Adapter, Pipe to Hose - 90 DEG
8	870-0281	2	Nut, Self-locking - Hex Washer Head (3/8-16)
9	141-0841	1	Carburetor, Gasoline (Includes Parts Marked *)
10	141-0911	1	* Cover, Choke with Heater - 12 VDC
11	141-0850	1	* Solenoid, Fuel Cutoff - 12 VDC
12	141-0852	1	* Gasket
13	520-0311	2	Stud (3/8-16 x 1-5/8"LG)
14	110-0445	4	Nut, Hex (5/16-24)
15	526-0065	4	Washer, Flat (21/64"ID x 9/16"OD x 1/16"THK)
16	145-0482	1	Adapter, Carburetor
17	520-0011	4	Stud (5/16-18 x 5/16-24 x 1-7/8"LG)
18	114-0022	2	Screw, Cap - Hex Head (5/16-18 x 1-3/4")
19	850-0045	2	Washer, Lock - Spring (5/16")
20	149-1437	1	Pump, Fuel
21	149-1436	1	Gasket
22	332-1554	1	Clamp, Loop
23	148-0367	1	Switch, Control - Vacuum (12 VDC)
24	505-0098	1	Nipple, Pipe Close (1/8 NPT x 3/4"LG)
25	308-0005	1	Switch, Toggle
26	813-0100	2	Screw, Machine - Round Head (#10-32 x 1/2")
27	850-0030	2	Washer, Lock - Spring (#10)
28	871-0010	2	Nut, Hex (#10-32)
29	308-0150	1	Plate, Mounting - Switch
30	306-0155	1	Bracket, Mounting
31	503-0465	2	Clamp, Hose
32	503-0542	1	Hose, Rubber (1-1/4"ID x 2-1/4"LG)
33	148-0764	1	Mixer, Gas
34	505-0106	1	Nipple, Pipe (1/2 NPT x 1-1/2"LG)
35	505-0040	1	Elbow, Pipe - 90 DEG (1/2 NPT)
36	505-0100	1	Nipple, Pipe (1/2 NPT x 1-1/8"LG)
37	505-0021	1	Bushing, Reducer (3/4 NPT x 1/2 NPT)
38	307-0312	1	Valve, Solenoid - 3/4 NPT (12 VDC)
39	505-0102	1	Nipple, Pipe - Close (3/4 NPT x 1-3/8"LG)
40	505-0129	1	Bushing, Reducer (1 NPT x 3/4 NPT)
41	148-0636	1	Regulator, Pressure - Gas (LPG Vapor) 1 NPT
42	502-0029	1	Bushing, Reducer - Brass (1/4 NPT x 1/8 NPT)
43	504-0007	1	Valve, Shutoff (1/8 NPT)

* - Parts Included with Carburetor.

Dual Fuel System Gasoline/LPG Liquid

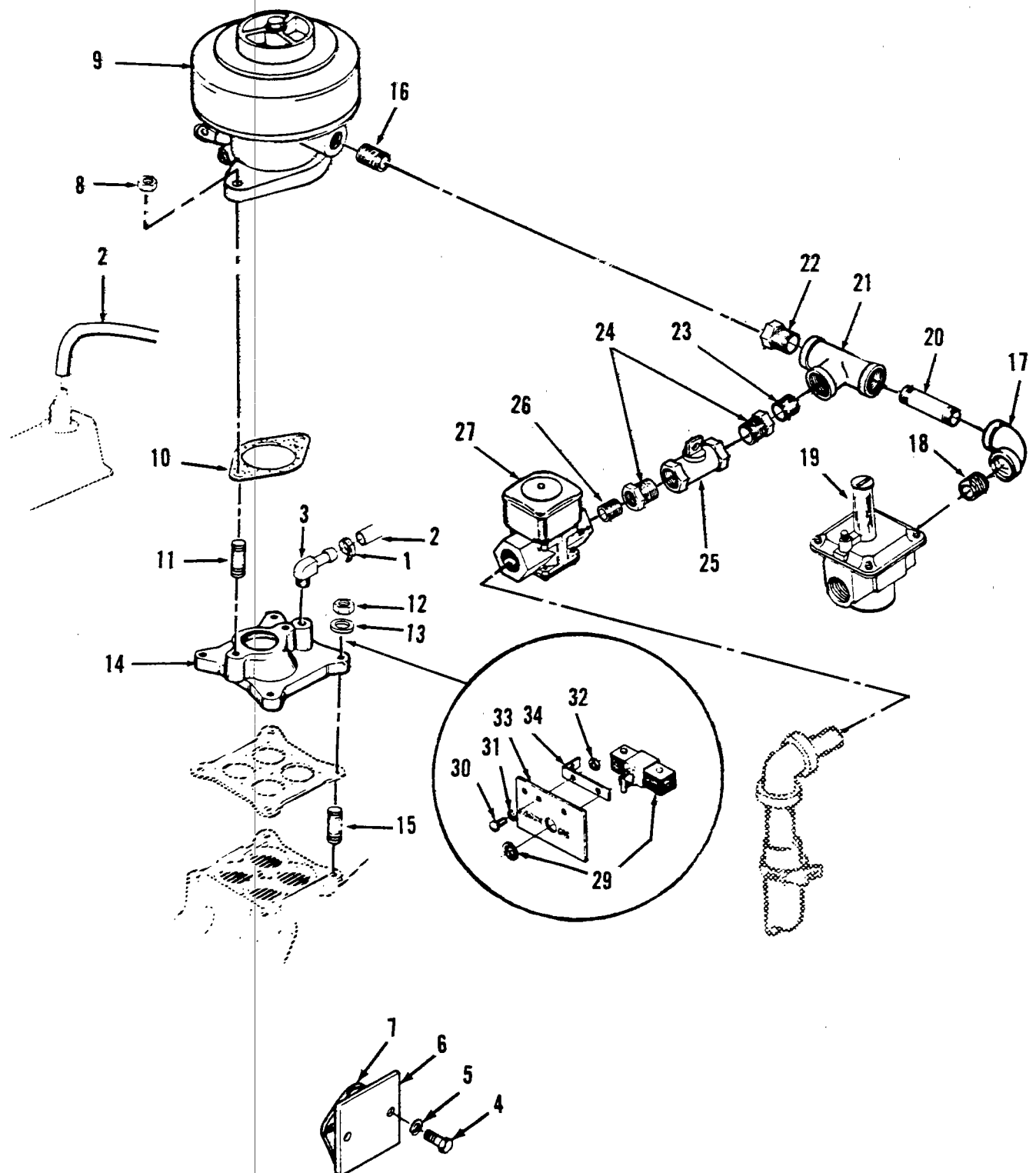


Dual-Fuel System Gasoline/LPG Liquid

Ref. No.	Part No.	Qty. Used	Part Description
1	501-0005	1	Line, Fuel - Flexible
2	501-0066	1	Line, Fuel - Flexible
3	502-0002	1	Elbow, Line - 90 DEG (1/8 NPT x 1/4 NPT Line)
4	502-0041	1	Elbow, Line - 90 DEG (1/4 NPT x 1/4 NPT Line)
5	503-0547	1	Clamp, Hose
6	503-1100	1	Hose, Rubber (1/2" ID x 23"LG)
7	502-0237	1	Adapter, Pipe to Hose - 90 DEG
8	870-0281	2	Nut, Self-locking - Hex Washer Head (3/8-16)
9	141-0902	1	Carburetor, Gasoline (Includes Parts Marked *)
10	141-0911	1	* Cover, Choke with Heater - 12 VDC
11	141-0850	1	* Solenoid, Fuel Cutoff - 12 VDC
12	141-0852	1	* Gasket
13	520-0311	2	Stud (3/8-16 x 1-5/8"LG)
14	110-0445	4	Nut, Hex (5/16-24)
15	526-0065	4	Washer, Flat (21/64"ID x 9/16"OD x 1/16"THK)
16	145-0482	1	Adapter, Carburetor
17	520-0011	4	Stud (5/16-18 x 5/16-24 x 1-7/8"LG)
18	114-0022	2	Screw, Cap - Hex Head (5/16-18 x 1-3/4")
19	850-0045	2	Washer, Lock - Spring (5/16")
20	149-1437	1	Pump, Fuel
21	149-1436	1	Gasket
22	332-1554	1	Clamp, Loop
23	148-0367	1	Switch, Control - Vacuum (12 VDC)
24	502-0098	1	Nipple, Pipe Close (1/8 NPT x 3/4"LG)
25	308-0005	1	Switch, Toggle
26	813-0100	2	Screw, Machine - Round Head (#10-32 x 1/2")
27	850-0030	2	Washer, Lock - Spring (#10)
28	871-0010	2	Nut, Hex (#10-32)
29	308-0150	1	Plate, Mounting - Switch
30	306-0155	1	Bracket, Mounting
31	503-0465	2	Clamp, Hose
32	503-0542	1	Hose, Rubber (1-1/4"ID x 2-1/4"LG)
33	148-0764	1	Mixer, Gas
34	505-0106	1	Nipple, Pipe (1/2 NPT x 1-1/2"LG)
35	505-0040	1	Elbow, Pipe - 90 DEG (1/2 NPT)
36	505-0100	1	Nipple, Pipe (1/2 NPT x 1-1/8"LG)
37	505-0021	1	Bushing, Reducer (3/4 NPT x 1/2 NPT)
38	307-0312	1	Valve, Solenoid - 3/4 NPT (12 VDC)

* - Parts Included with Carburetor.

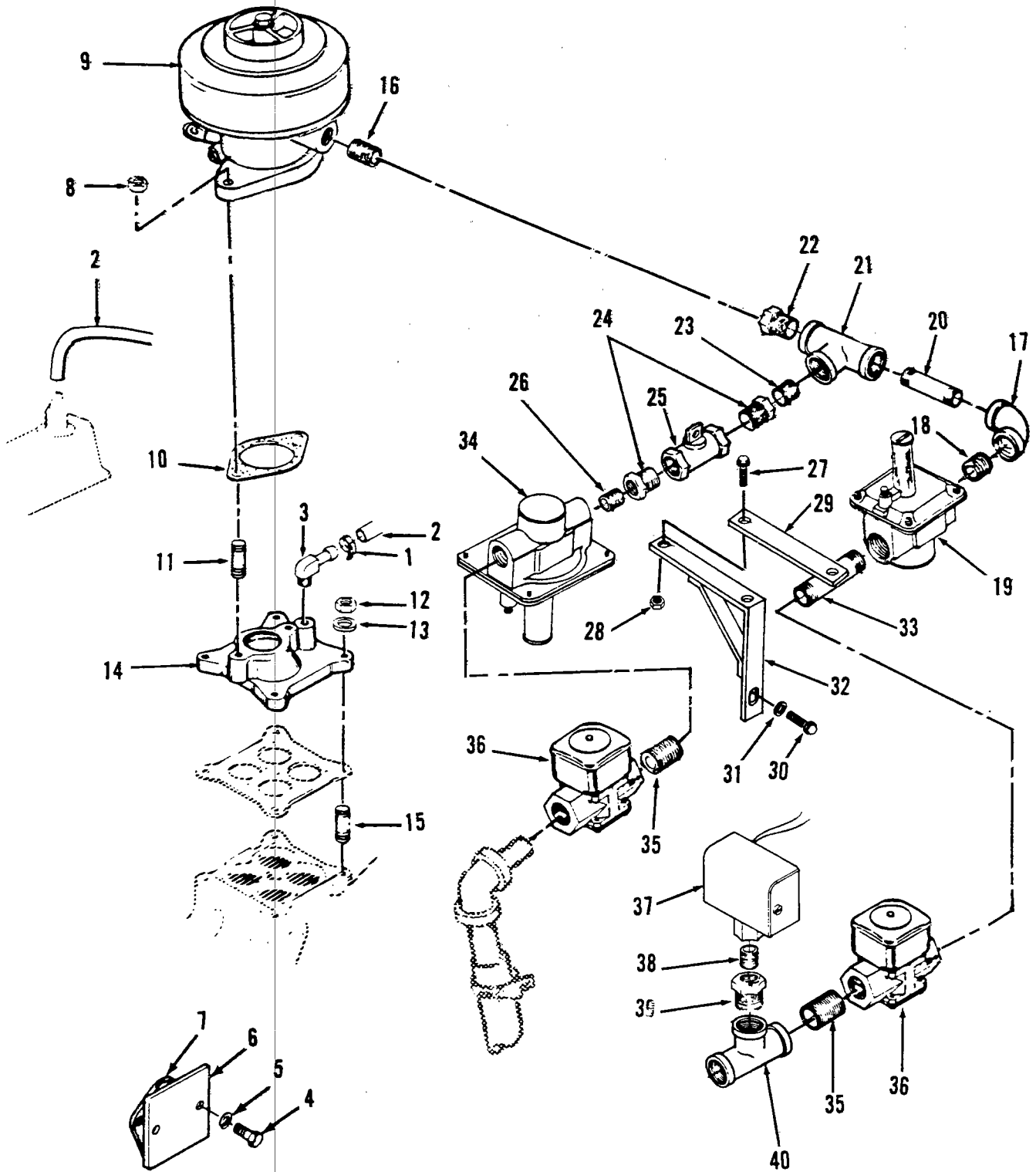
Dual Fuel System
LPG and Natural Gas
(Manual Changeover)



Dual Fuel System
LPG and Natural Gas
(Manual Changeover)

Ref. No.	Part No.	Qty. Used	Part Description
1	503-0547	1	Clamp, Hose
2	503-1100	1	Hose, Rubber (1/2"ID x 23"LG)
3	502-0237	1	Adapter, Pipe to Hose - 90 DEG
4	800-0025	2	Screw, Cap - Hex Head (5/16-18 x 5/8")
5	850-0045	2	Washer, Lock - Spring (5/16")
6	149-0638	1	Plate, Cover - Fuel Pump Mounting Hole
7	149-1436	1	Gasket
8	870-0281	2	Nut, Self-locking - Hex Washer Head (3/8-16)
9	148-0763	1	Carburetor, Gas Vapor
10	141-0852	1	Gasket
11	520-0311	2	Stud (3/8-16 x 1-5/8"LG)
12	110-0445	4	Nut, Hex (5/16-24)
13	526-0065	4	Washer, Flat (21/64"ID x 9/16"OD x 1/16"THK)
14	145-0482	1	Adapter, Carburetor
15	520-0011	4	Stud (5/16-18 x 5/16-24 x 1-7/8"LG)
16	505-0100	1	Nipple, Pipe (1/2 NPT x 1-1/8"LG)
17	505-0132	1	Elbow, Pipe - 90 DEG (3/4 NPT)
18	505-0102	1	Nipple, Pipe (3/4 NPT x 1-3/8"LG)
19	148-0597	1	Regulator, Pressure - Gas (Nat Gas) 3/4 NPT
20	505-0084	1	Nipple, Pipe (3/4 NPT x 2-1/2"LG)
21	505-0166	1	Tee, Pipe (3/4 NPT)
22	505-0021	1	Bushing, Reducer (3/4 NPT x 1/2 NPT)
23	505-0102	1	Nipple, Pipe (3/4 NPT x 1-3/8"LG)
24	505-0129	2	Bushing, Reducer (1 NPT x 3/4 NPT)
25	148-0626	1	Valve, Control - Manual
26	505-0085	1	Nipple, Pipe (3/4 NPT x 2"LG)
27	307-0312	1	Valve, Solenoid - 3/4 NPT (12 VDC)

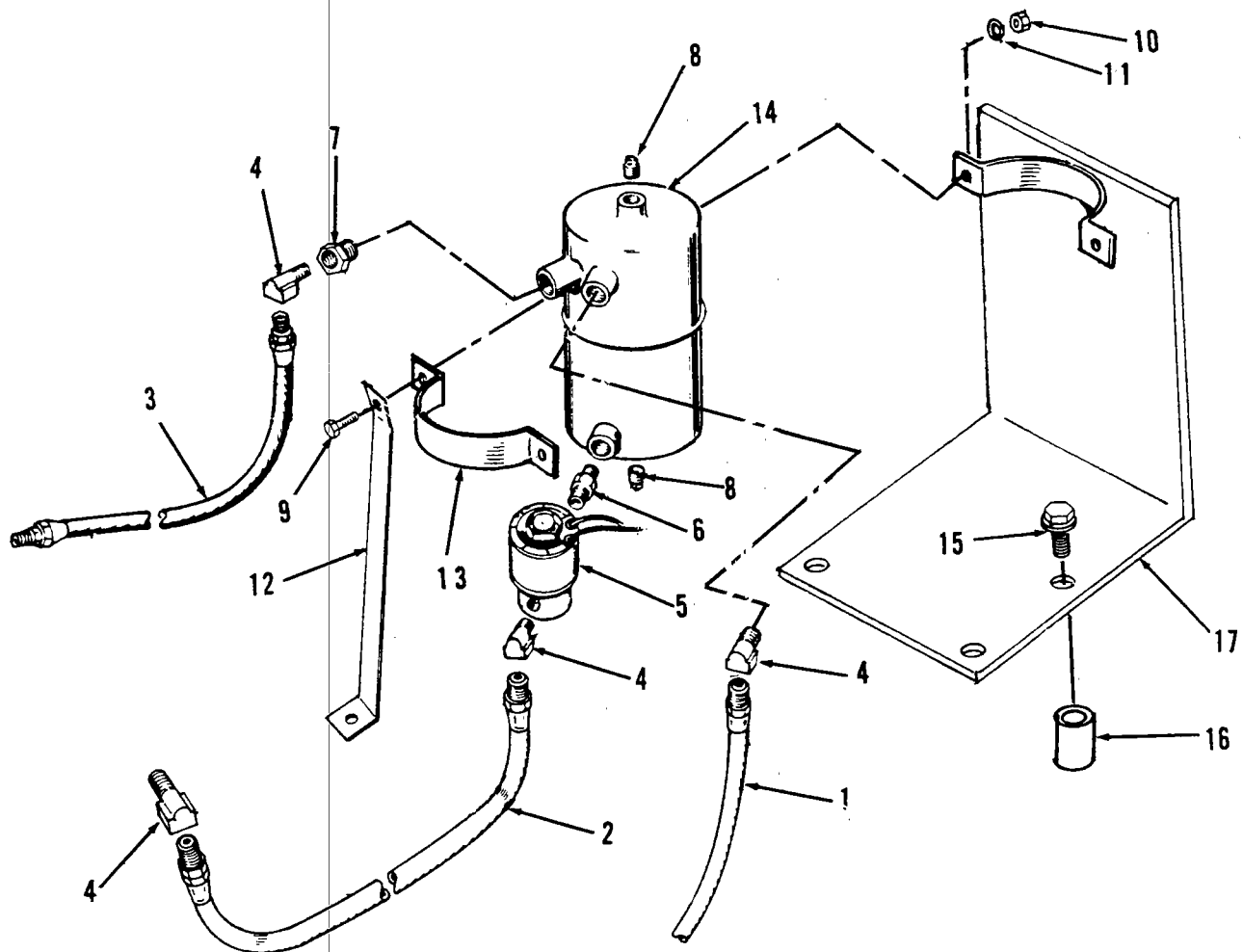
Dual Fuel System
LPG and Natural Gas
(Automatic Changeover)



Dual Fuel System
LPG and Natural Gas
(Automatic Changeover)

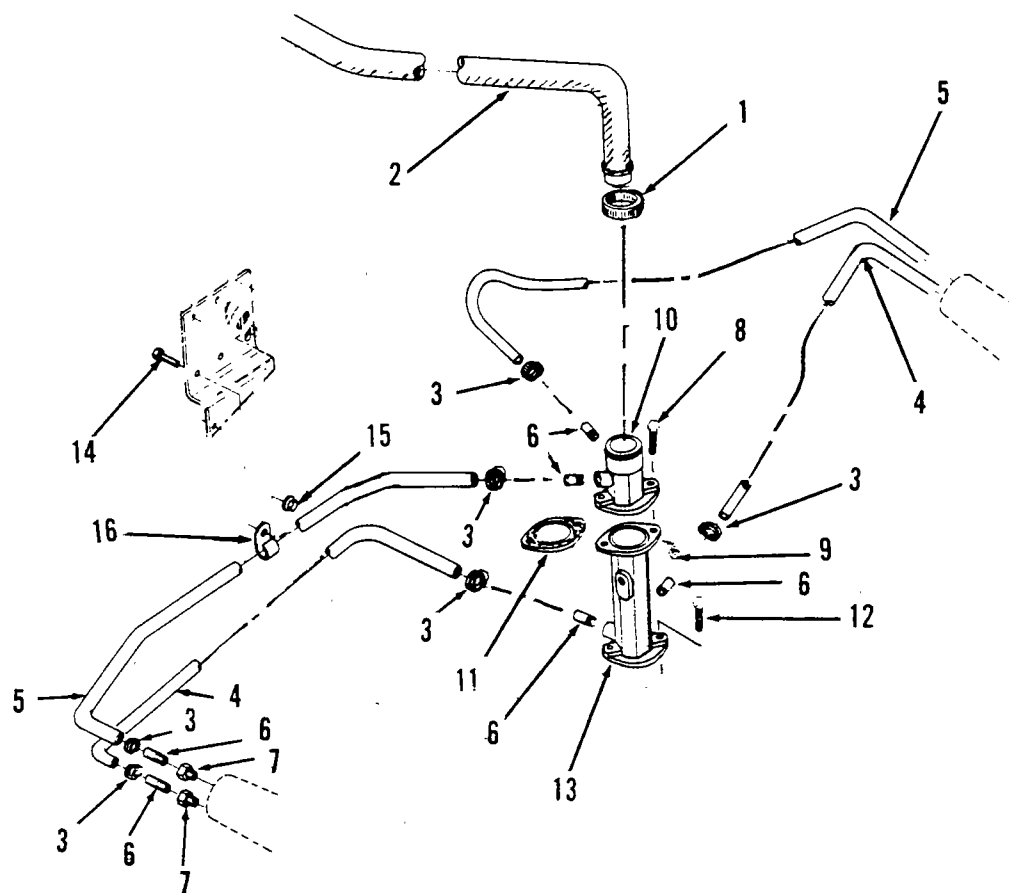
Ref. No.	Part No.	Qty. Used	Part Description
1	503-0547	1	Clamp, Hose
2	503-1100	1	Hose, Rubber (1/2"ID x 23"LG)
3	502-0237	1	Adapter, Pipe to Hose - 90 DEG
4	800-0025	2	Screw, Cap - Hex Head (5/16-18 x 5/8")
5	850-0045	2	Washer, Lock - Spring (5/16")
6	149-0638	1	Plate, Cover - Fuel Pump Mounting Hole
7	149-1436	1	Gasket
8	870-0281	2	Nut, Self-locking - Hex Washer Head (3/8-16)
9	148-0763	1	Carburetor, Gas Vapor
10	141-0852	1	Gasket
11	520-0311	2	Stud (3/8-16 x 1-5/8"LG)
12	110-0445	4	Nut, Hex (5/16-24)
13	526-0065	4	Washer, Flat (21/64"ID x 9/16"OD x 1/16"THK)
14	145-0482	1	Adapter, Carburetor
15	520-0011	4	Stud (5/16-18 x 5/16-24 x 1-7/8"LG)
16	505-0100	1	Nipple, Pipe (1/2 NPT x 1-1/8"LG)
17	505-0132	1	Elbow, Pipe - 90 DEG (3/4 NPT)
18	505-0102	1	Nipple, Pipe (3/4 NPT x 1-3/8"LG)
19	148-0597	1	Regulator, Pressure - Gas (Nat Gas) 3/4 NPT
20	505-0084	1	Nipple, Pipe (3/4 NPT x 2-1/2"LG)
21	505-0166	1	Tee, Pipe (3/4 NPT)
22	505-0021	1	Bushing, Reducer (3/4 NPT x 1/2 NPT)
23	505-0102	1	Nipple, Pipe (3/4 NPT x 1-3/8"LG)
24	505-0129	2	Bushing, Reducer (1 NPT x 3/4 NPT)
25	148-0626	1	Valve, Control - Manual
26	505-0085	1	Nipple, Pipe (3/4 NPT x 2"LG)
27	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")
28	870-0218	2	Nut, Self-locking - Hex (1/4-20)
29	148-0784	1	Strap
30	821-0029	1	Screw, Self-locking - Hex Washer Head (3/8-16 x 3/4")
31	526-0013	1	Washer, Flat (3/8")
32	148-0787	1	Brace, Support
33	505-0332	1	Nipple, Pipe (3/4 NPT x 3"LG)
34	148-0637	1	Regulator, Pressure - Gas (LPG Gas) 3/4 NPT
35	505-0102	2	Nipple, Pipe (3/4 NPT x 1-3/8"LG)
36	307-0312	2	Valve, Solenoid - 3/4 NPT (12 VDC)
37	148-0627	1	Switch, Pressure - 12 VDC
38	505-0099	1	Nipple, Pipe - Close (1/4 NPT x 7/8"LG)
39	505-0020	1	Bushing, Reducer (3/4 NPT x 1/4 NPT)
40	505-0166	1	Tee, Pipe (3/4 NPT)

Fuel Reservoir (Day Tank)



Ref. No.	Part No.	Qty. Used	Part Description
1	501-0010	1	Line, Fuel - Flexible(Incoming)
2	501-0003	1	Line, Fuel - Flexible (Tank to Carb)
3	501-0011	1	Line, Fuel - Flexible (Overflow Return)
4	502-0002	4	Elbow, Pipe - 90 DEG, Brass (1/4 SAE x 1/8 NPT)
5	307-0565	1	Valve, Solenoid - 12 VDC (1/8 NPT)
6	502-0082	1	Nipple, Pipe - Hex (1/8 NPT)
7	159-0705	1	Bushing, Reducer with Restrictor - Hex (3/8 NPT x 1/8 NPT)
8	505-0057	2	Plug, Pipe - Square Head (1/8 NPT)
9	821-0011	2	Screw, Self-locking - Hex Washer Head (1/4-20 x 7/8")
10	870-0212	2	Nut, Self-locking - Hex Washer Head (1/4-20)
11	850-0040	2	Washer, Lock - Spring (1/4")
12	159-1037	2	Brace
13	159-0253	1	Clamp, Mounting - Tank
14	159-0294	1	Tank, Fuel Reservoir
15	821-0023	1	Screw, Self-locking - Hex Washer Head (5/16-18 x 1-1/2")
16	159-1039	1	Spacer, Sleeve
17	159-1038	1	Bracket, Mounting - Tank

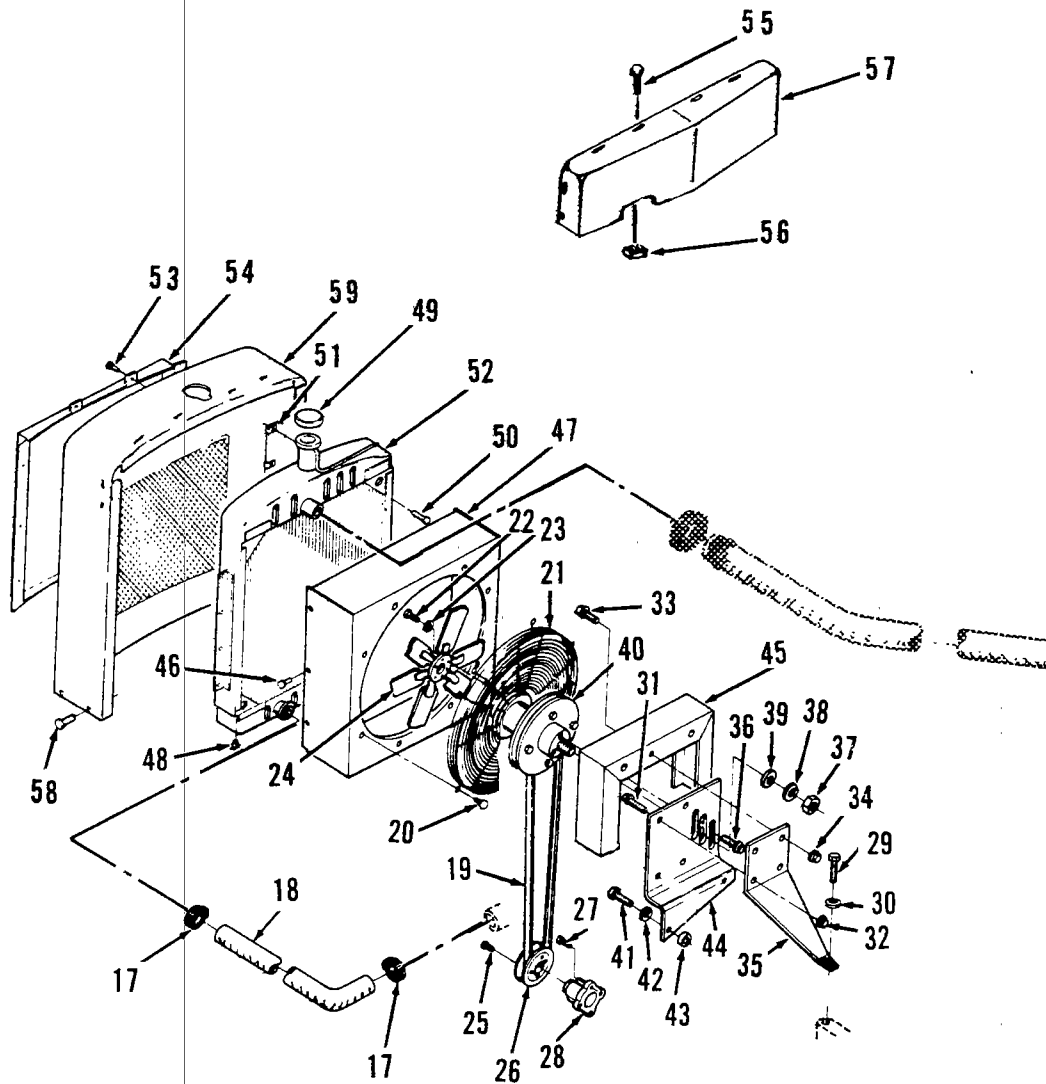
Cooling System (Radiator)



Ref. No.	Part No.	Qty. Used	Part Description
1	503-0365	1	Clamp, Hose
2	503-0753	1	Hose, Radiator - Upper
3	503-0183	8	Clamp, Hose
4	503-0833	2	Hose, Rubber (5/8"ID x 24"LG)
5	503-1168	2	Hose, Rubber (5/8"ID x 36"LG)
6	505-0135	8	Nipple, Pipe - Half (3/8 NPT x 1-1/2")
7	505-0019	4	Bushing, Reducer - Hex (1/2 NPT x 3/8 NPT)
8	821-0023	2	Screw, Self-locking - Hex Washer Head (5/16-18 x 1-1/2)
9	870-0048	2	Nut, Self-locking - Hex Washer Head (5/16-18)
10	130-1018	1	Adapter, Thermostat
11	130-1024	2	Gasket
12	821-0021	2	Screw, Self-locking - Hex Washer Head (5/16-18 x 1")
13	130-1019	1	Outlet, Water
14	800-0051	1	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
15	870-0133	1	Nut, Self-locking - Hex Washer Head (3/8-16)
16	148-0274	2	Clamp, Loop

- cont -

Cooling System (Radiator)

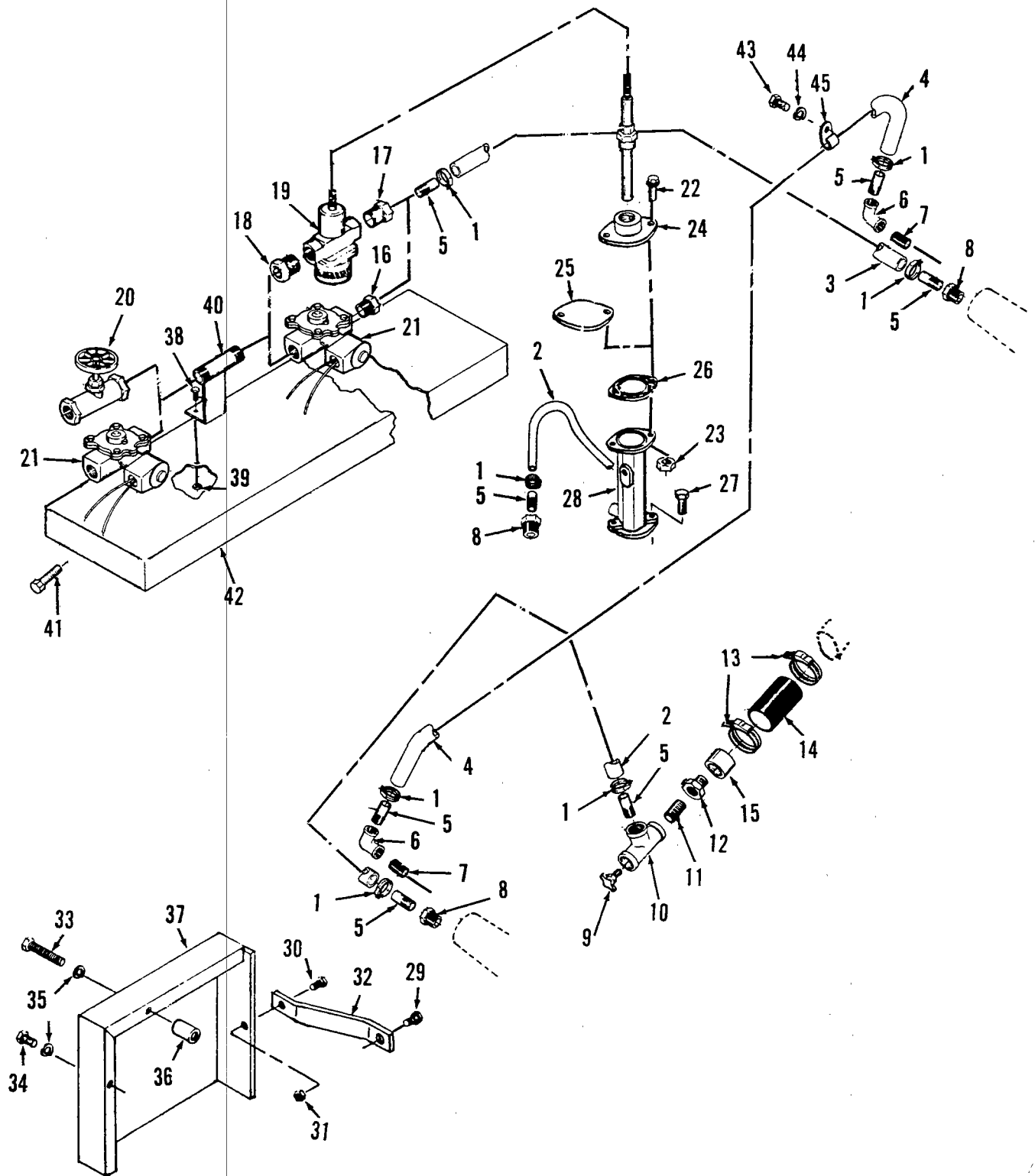


Cooling System (Radiator)

Ref. No.	Part No.	Qty. Used	Part Description
17	503-0365	2	Clamp, Hose
18			Hose, Radiator - Lower
	503-0846	1	Spec A (2"ID x 20"LG)
	503-0635	1	Begin Spec B (2"ID x 19"LG)
19			Belt, Drive - V
	511-0100	1	Spec A
	511-0084	1	Begin Spec B
20	821-0010	8	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
21	130-0986	1	Guard, Fan
22	821-0016	6	Screw, Self-locking - Hex Washer Head (5/16-18 x 3/4")
23	526-0122	6	Washer, Flat (11/32"ID x 25/32"OD x 1/8"THK)
24	130-0428	1	Fan
25	821-0010	4	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
26	512-0059	1	Pulley
27	800-0055	4	Screw, Cap - Hex Head (3/8-16 x 2-1/4")
28	130-0968	1	Adapter - Drive Pulley
29	800-0048	1	Screw, Cap - Hex Head (3/8-16 x 3/4")
30	850-0050	1	Washer, Lock - Spring (3/8")
31	821-0016	2	Screw, Self-locking - Hex Washer Head (5/16-18 x 3/4")
32	870-0048	2	Nut, Self-locking - Hex Washer Head (5/16-18)
33	821-0016	2	Screw, Self-locking - Hex Washer Head (5/16-18 x 3/4")
34	870-0048	2	Nut, Self-locking - Hex Washer Head (5/16-18)
35	130-0973	1	Brace
36	821-0016	2	Screw, Self-locking - Hex Washer Head (5/16-18 x 3/4")
37	862-0016	1	Nut, Hex (1/2-13)
38	850-0060	1	Washer, Lock - Spring (1/2")
39	526-0035	1	Washer, Flat (17/32"ID x 7/8"OD x 1/8"THK)
40	130-0981	1	Hub & Pulley Assembly (Includes the following non-illustrated replaceable parts Marked *)
	821-0010	4	*Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
	512-0059	1	*Pulley
	518-0342	1	*Ring, Retaining
	130-0972	1	*Collar
	130-0970	1	*Bearing, Ball
	130-0969	1	*Hub
41	800-0051	1	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
42	850-0050	1	Washer, Lock - Spring (3/8)
43	191-0864	1	Spacer, Sleeve
44	130-0971	1	Bracket, Mounting - Fan Drive
45	130-0989	1	Guard, Fan
46	821-0010	6	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
47	130-0975	1	Shroud, Radiator
48	504-0003	1	Cock, Drain (1/4 NPT)
49	130-0449	1	Cap, Radiator
50	821-0014	6	Screw, Self-locking - Hex Washer Head (5/16-18 x 1/2")
51	870-0113	6	Nut, Retainer (5/16-18)
52	130-0961	1	Radiator (Includes Cap)
53	815-0181	10	Screw, Cap - Hex Head, Thread Cutting, with ET Lockwasher (#10-32 x 1/2")
54	405-2870	1	Flange, Air Duct
55	821-0014	8	Screw, Self-locking - Hex Washer Head (5/16-18 x 1/2")
56	870-0113	8	Nut, Retainer (5/16-18)
57	405-1837	1	Hood Extension - Spec A Only
58	821-0014	8	Screw, Self-locking - Hex Washer Head (5/16-18 x 1/2")
59	405-1836	1	Panel, Housing - Front

* - Parts Included with Hub & Pulley Assembly.

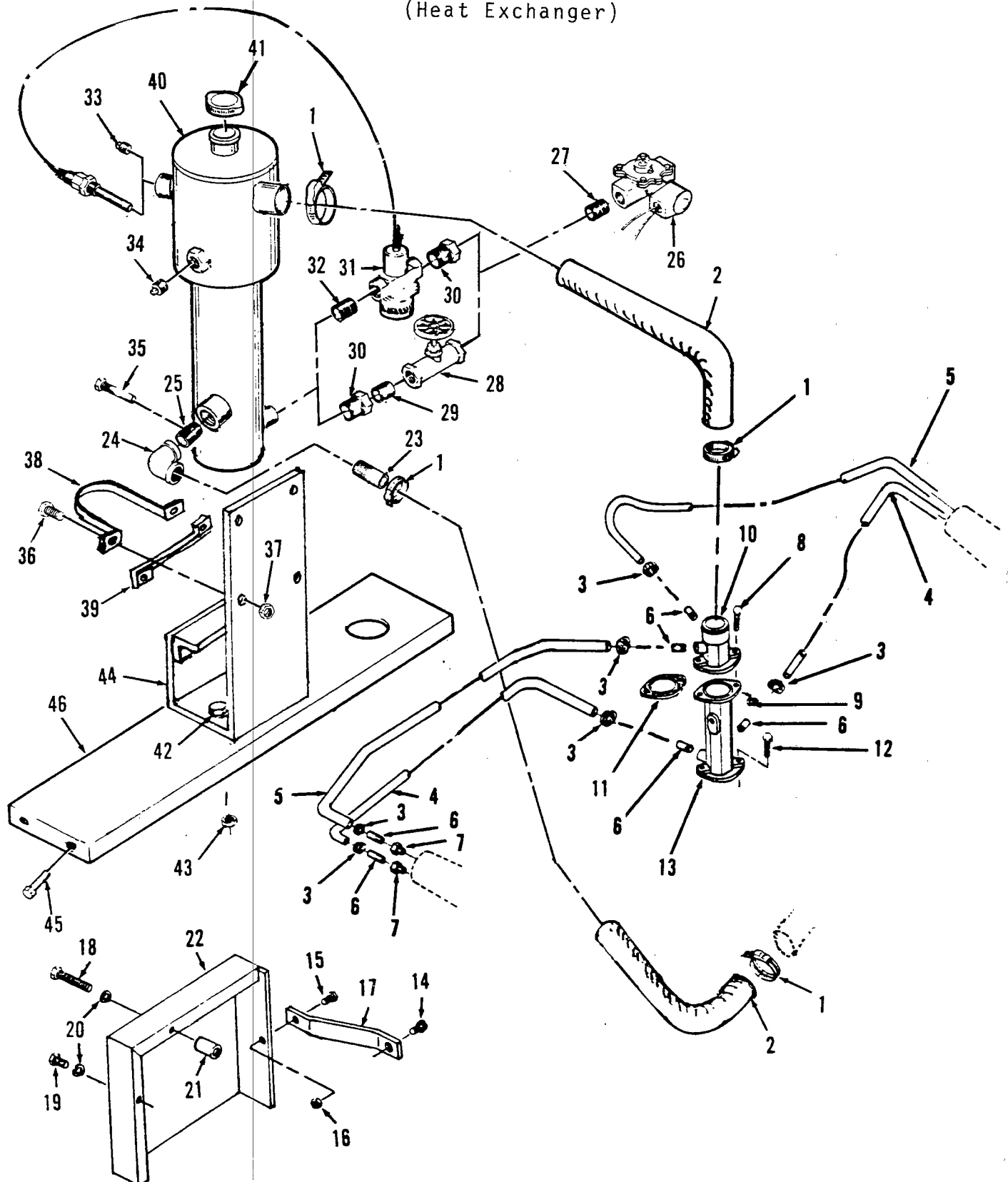
Cooling System (City Water)



Cooling System
(City Water)

Ref. No.	Part No.	Qty. Used	Part Description
1	503-0183	8	Clamp, Hose
2	503-0833	2	Hose, Rubber (5/8"ID x 24"LG)
3	503-1168	1	Hose, Rubber (5/8"ID x 36"LG)
4	503-1169	1	Hose, Rubber (5/8"ID x 48"LG)
5	505-0135	8	Nipple, Pipe - Half (3/8 NPT x 1-1/2")
6	505-0120	2	Elbow, Pipe - 90 DEG (3/8 NPT)
7	505-0101	2	Nipple, Pipe - Close (3/8 NPT)
8	505-0019	6	Bushing, Reducer - Hex (1/2 NPT x 3/8 NPT)
9	504-0028	1	Cock, Drain (3/8 NPT)
10	505-0060	1	Tee, Pipe (3/8 NPT)
11	505-0101	1	Nipple, Pipe - Close (3/8 NPT)
12	505-0128	1	Bushing, Reducer - Hex (1-1/4 NPT x 3/8 NPT)
13	503-0465	2	Clamp, Hose
14	503-0809	1	Hose, Rubber (2-5/8"ID x 3"LG)
15	505-0031	1	Coupling, Pipe (1-1/4 NPT)
16	505-0019	1	Bushing, Reducer - Hex (1/2 NPT x 3/8 NPT)
17	505-0131	1	Bushing, Reducer - Hex (3/4 NPT x 3/8 NPT)
18	505-0021	1	Bushing, Reducer - Hex (3/4 NPT x 1/2 NPT)
19	309-0241	1	Valve, Control - Temperature Regulating
20	504-0019	1	Valve, Globe (1/2 NPT)
21	307-0833	1	Valve, Solenoid - 12 VDC (1/2 NPT)
22	821-0023	2	Screw, Self-locking - Hex Washer Head (5/16-18 x 1-1/2")
23	870-0048	2	Nut, Self-locking - Hex Washer Head (5/16-18)
24	130-1021	1	Plate, Outlet with Tapped Hole
25	130-1022	1	Plate, Outlet
26	130-1024	2	Gasket
27	821-0021	2	Screw, Self-locking - Hex Washer Head (5/16-18 x 1")
28	130-1019	1	Outlet, Water
29	821-0014	1	Screw, Self-locking - Hex Washer Head (5/16-18 x 2")
30	821-0010	1	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
31	870-0212	1	Nut, Self-locking - Hex Washer Head (1/4-20)
32	130-1008	1	Strap
33	800-0054	1	Screw, Cap - Hex Head (3/8-16 x 2")
34	800-0046	1	Screw, Cap - Hex Head (3/8-16 x 1/2")
35	850-0050	2	Washer, Lock - Spring (3/8")
36	130-1009	1	Spacer, Sleeve
37	130-1050	1	Guard, Belt
38	821-0013	2	Screw, Self-locking - Hex Washer Head (1/4-20 x 1")
39	870-0065	2	Nut, Self-locking - Hex (1/4-20)
40	110-0526	1	Nipple, Pipe with Bracket (1/2 NPT)
41	821-0014	7	Screw, Self-locking - Hex Washer Head (5/16-18 x 1/2")
42	130-0499	1	Plate, Mounting
43	800-0046	2	Screw, Cap - Hex Head (3/8-16 x 1/2")
44	850-0050	2	Washer, Lock - Spring (3/8")
45	148-0274	2	Bracket, Support - Hose

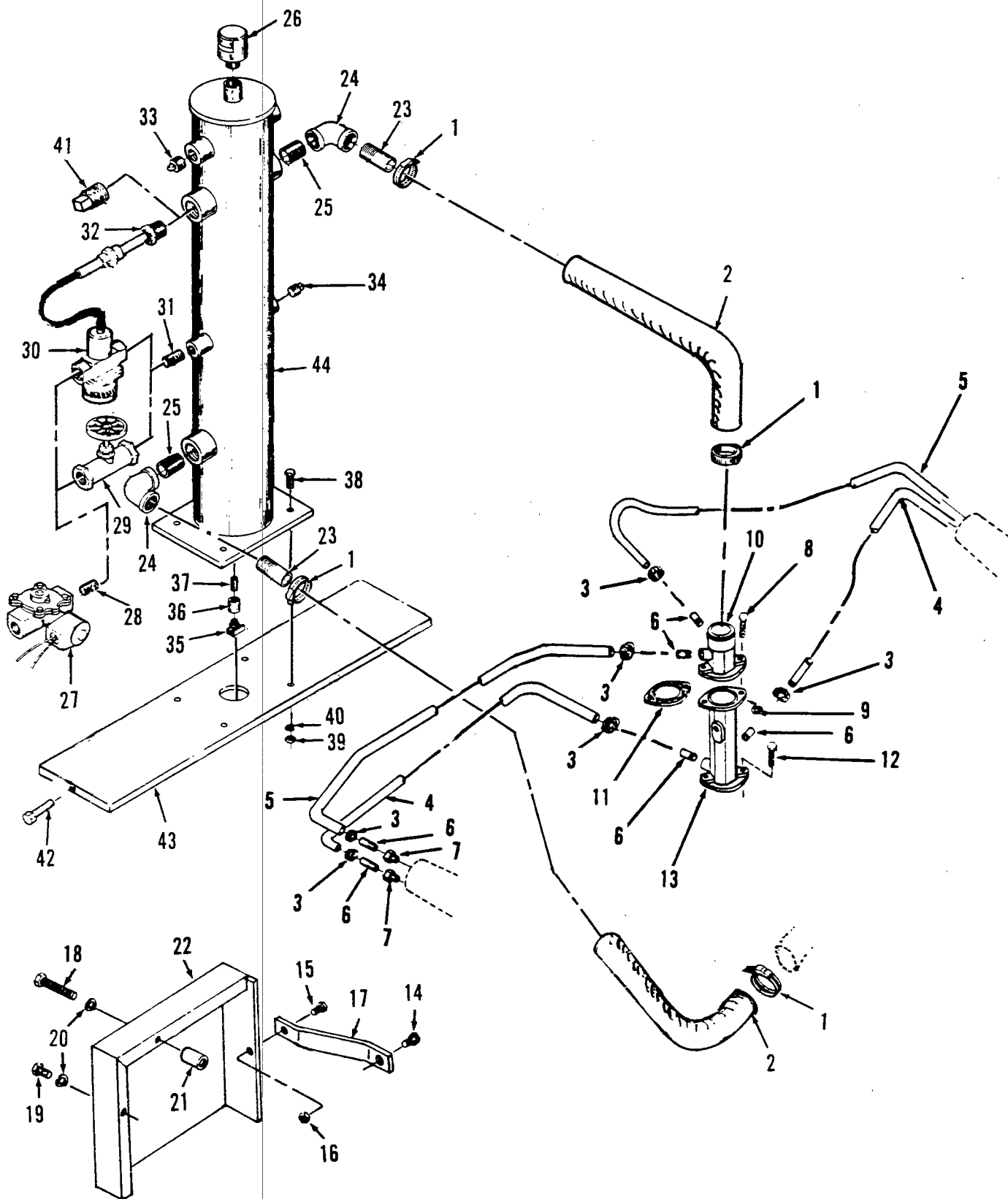
Cooling System (Heat Exchanger)



Cooling System (Heat Exchanger)

Ref. No.	Part No.	Qty. Used	Part Description
1	503-0365	4	Clamp, Hose
2	503-0846	2	Hose, Radiator (2"ID x 20"LG)
3	503-0183	8	Clamp, Hose
4	503-0833	2	Hose, Rubber (5/8"ID x 24"LG)
5	503-1168	2	Hose, Rubber (5/8"ID x 36"LG)
6	505-0135	8	Nipple, Pipe - Half (3/8 NPT x 1-1/2")
7	505-0019	4	Bushing, Reducer - Hex (1/2 NPT x 3/8 NPT)
8	821-0023	2	Screw, Self-locking - Hex Washer Head (5/16-18 x 1-1/2")
9	870-0048	2	Nut, Self-locking - Hex Washer Head (5/16-18)
10	130-1018	1	Adapter, Thermostat
11	130-1024	2	Gasket
12	821-0021	2	Screw, Self-locking - Hex Washer Head (5/16-18 x 1")
13	130-1019	1	Outlet, Water
14	821-0014	1	Screw, Self-locking - Hex Washer Head (5/16-18 x 2")
15	821-0010	1	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
16	870-0212	1	Nut, Self-locking - Hex Washer Head (1/4-20)
17	130-1008	1	Strap
18	800-0054	1	Screw, Cap - Hex Head (3/8-16 x 2")
19	800-0046	1	Screw, Cap - Hex Head (3/8-16 x 1/2")
20	850-0050	2	Washer, Lock - Spring (3/8")
21	130-1009	1	Spacer, Sleeve
22	130-1050	1	Guard, Belt
23	503-0385	1	Nipple, Pipe - Half (1-1/2 NPT x 2"LG)
24	505-0043	1	Elbow, Pipe - 90 DEG (1-1/2 NPT)
25	505-0220	1	Nipple, Pipe - Close (1-1/2 NPT)
26	307-0833	1	Valve, Solenoid - 12 VDC (1/2 NPT)
27	505-0100	1	Nipple, Pipe - Close (1/2 NPT)
28	504-0019	1	Valve, Globe (1/2 NPT)
29	505-0100	1	Nipple, Pipe - Close (1/2 NPT)
30	505-0021	1	Bushing, Reducer - Hex (3/4 NPT x 1/2 NPT)
31	309-0241	1	Valve, Control - Temperature Regulating
32	505-0102	1	Nipple, Pipe - Close (3/4 NPT)
33	505-0130	1	Plug, Pipe - Square Head (3/4 NPT)
34	505-0130	1	Plug, Pipe - Square Head (3/4 NPT)
35	130-1340	1	Pencil, Zinc (3/8 NPT)
36	821-0011	5	Screw, Self-locking - Hex Washer Head (1/4-20 x 7/8")
37	870-0212	5	Nut, Self-locking - Hex Washer Head (1/4-20)
38	130-0802	2	Strap, Holddown - Heat Exchanger
39	130-1112	1	Strap, Support
40	130-1111	1	Heat Exchanger (Includes Cap)
41	130-0661	1	Cap, Radiator (7 Lb PSI)
42	821-0016	3	Screw, Self-locking - Hex Washer Head (5/16-18 x 3/4")
43	870-0048	3	Nut, Self-locking - Hex (5/16-18)
44	130-1110	1	Bracket, Mounting - Heat Exchanger
45	821-0014	6	Screw, Self-locking - Hex Washer Head (5/16-18 x 1/2")
46	130-0805	1	Plate, Mounting - Heat Exchanger

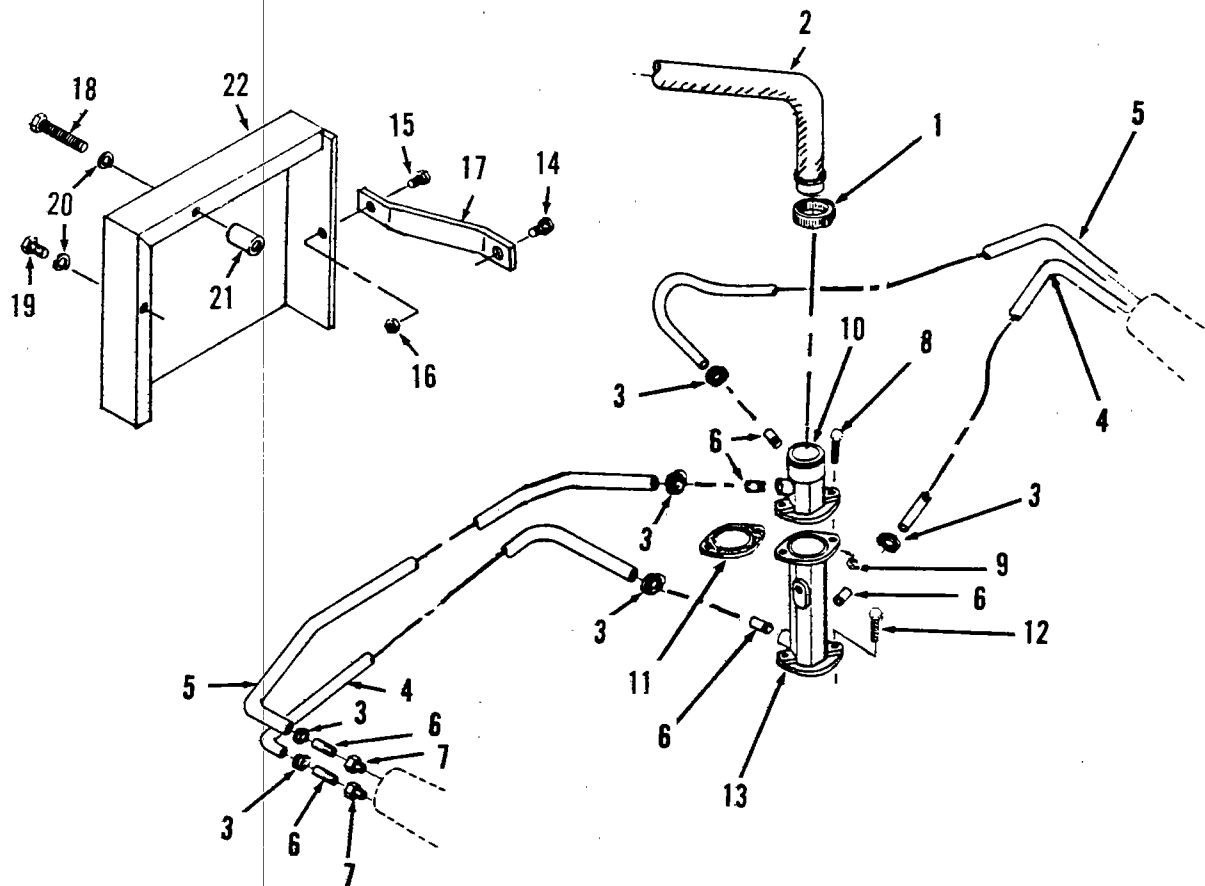
Cooling System (Standpipe)



Cooling System (Standpipe)

Ref. No.	Part No.	Qty. Used	Part Description
1	503-0365	4	Clamp, Hose
2	503-0635	2	Hose, Radiator (2"ID x 19"LG)
3	503-0183	8	Clamp, Hose
4	503-0833	2	Hose, Rubber (5/8"ID x 24"LG)
5	503-1168	2	Hose, Rubber (5/8"ID x 36"LG)
6	505-0135	8	Nipple, Pipe - Half (3/8 NPT x 1-1/2")
7	505-0019	4	Bushing, Reducer - Hex (1/2 NPT x 3/8 NPT)
8	821-0023	2	Screw, Self-locking - Hex Washer Head (5/16-18 x 1-1/2")
9	870-0048	2	Nut, Self-locking - Hex Washer Head (5/16-18)
10	130-1018	1	Adapter, Thermostat
11	130-1024	2	Gasket
12	821-0021	2	Screw, Self-locking - Hex Washer Head (5/16-18 x 1")
13	130-1019	1	Outlet, Water
14	821-0014	1	Screw, Self-locking - Hex Washer Head (5/16-18 x 2")
15	821-0010	1	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
16	870-0212	1	Nut, Self-locking - Hex Washer Head (1/4-20)
17	130-1008	1	Strap
18	800-0054	1	Screw, Cap - Hex Head (3/8-16 x 2")
19	800-0046	1	Screw, Cap - Hex Head (3/8-16 x 1/2")
20	850-0050	2	Washer, Lock - Spring (3/8")
21	130-1009	1	Spacer, Sleeve
22	130-1050	1	Guard, Belt
23	505-0385	2	Nipple, Pipe - Half (1-1/2 NPT x 2"LG)
24	505-0043	2	Elbow, Pipe - 90 DEG (1-1/2 NPT)
25	505-0220	2	Nipple, Pipe - Close (1-1/2 NPT)
26	504-0062	1	Valve, Vacuum Relief (1/2 NPT)
27	307-0835	1	Valve, Solenoid - 12 VDC (3/4 NPT)
28	505-0102	1	Nipple, Pipe - Close (3/4 NPT)
29	504-0046	1	Valve, Globe (3/4 NPT)
30	309-0241	1	Valve, Control - Temperature Regulating (3/4NPT)
31	505-0102	1	Nipple, Pipe - Close (3/4 NPT)
32	505-0289	1	Bushing, Reducer - Hex (1-1/2 NPT x 3/4 NPT)
33	505-0140	1	Plug, Pipe - Square Head (1 NPT)
34	505-0130	1	Plug, Pipe - Square Head (3/4 NPT)
35	504-0028	1	Cock, Drain (3/8 NPT)
36	505-0028	1	Coupling, Pipe (3/8 NPT)
37	505-0101	1	Nipple, Pipe - Close (3/8 NPT)
38	821-0030	4	Screw, Self-locking - Hex Washer Head (3/8-16 x 1")
39	870-0133	4	Nut, Self-locking - Hex (3/8-16)
40	850-0050	4	Washer, Lock - Spring (3/8")
41	505-0402	1	Plug, Pipe - Square Head (1-1/2 NPT)
42	821-0014	7	Screw, Self-locking - Hex Washer Head (5/16-18 x 1/2")
43	130-1023	1	Plate, Mounting - Standpipe
44	130-0635	1	Standpipe

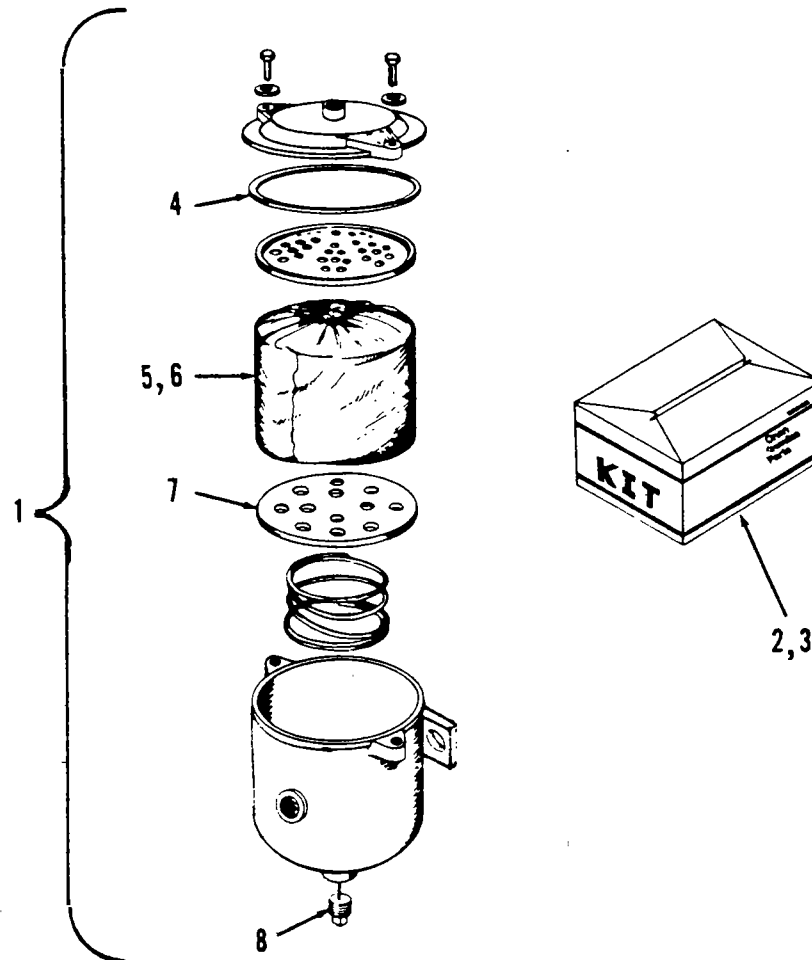
Cooling System (Remote Radiator)



Ref. No.	Part No.	Qty. Used	Part Description
1	503-0365	1	Clamp, Hose
2	#		Hose, Radiator (2" ID)
3	503-0183	8	Clamp, Hose
4	503-0833	2	Hose, Rubber (5/8"ID x 24"LG)
5	503-1168	2	Hose, Rubber (5/8"ID x 36"LG)
6	505-0135	8	Nipple, Pipe - Half (3/8 NPT x 1-1/2")
7	505-0019	4	Bushing, Reducer - Hex (1/2 NPT x 3/8 NPT)
8	821-0023	2	Screw, Self-locking - Hex Washer Head (5/16-18 x 1/2")
9	870-0048	2	Nut, Self-locking - Hex Washer Head (5/16-18)
10	130-1018	1	Adapter, Thermostat
11	130-1024	2	Gasket
12	821-0021	2	Screw, Self-locking - Hex Washer Head (5/16-18 x 1")
13	130-1019	1	Outlet, Water
14	821-0014	1	Screw, Self-locking - Hex Washer Head (5/16-18 x 2")
15	821-0010	1	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
16	870-0212	1	Nut, Self-locking - Hex Washer Head (1/4-20)
17	130-1008	1	Strap
18	800-0054	1	Screw, Cap - Hex Head (3/8-16 x 2")
19	800-0046	1	Screw, Cap - Hex Head (3/8-16 x 1/2")
20	850-0050	2	Washer, Lock - Spring (3/8")
21	130-1009	1	Spacer, Sleeve
22	130-1050	1	Guard, Belt

- Required length will vary per installation; measure the hose to be replaced and contact the nearest Authorized Onan Distributor for parts.

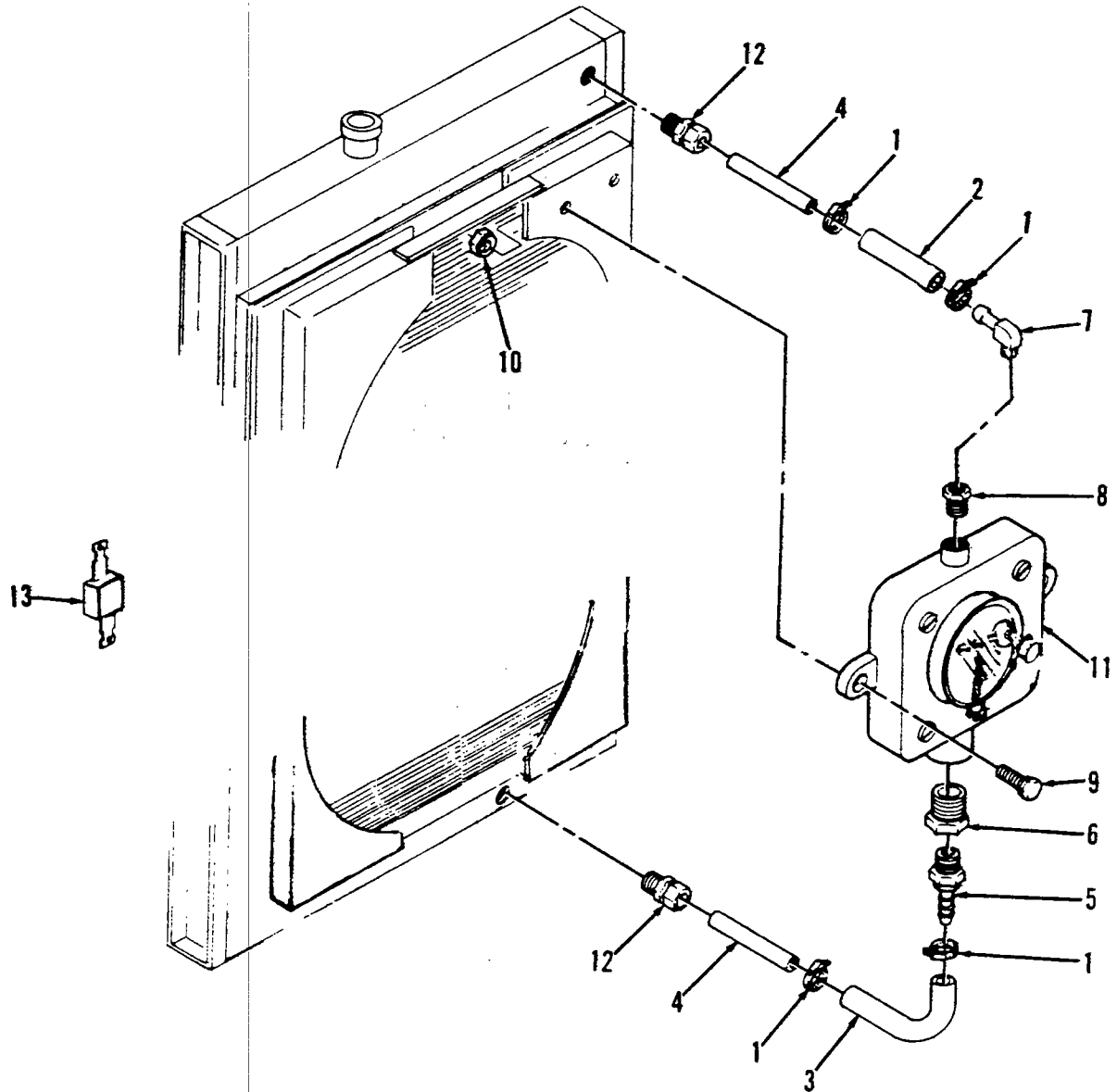
Filter - Coolant



Ref. No.	Part No.	Qty. Used	Part Description
1	130-0497	1	Filter, Coolant (Includes Element Marked *)
2	130-0771	1	Kit, Replacement (Includes parts marked *)
3	130-0772	1	Kit, Replacement (Includes parts marked #)
4	130-0778	1	*#Gasket, Cover
5	130-0775	1	*Element (Water)
6	130-0776	1	#Element (Anti-freeze)
7	130-0780	1	*#Plate, Sacrificial
8	502-0155	1	Plug, Pipe - Brass (3/8 NPT)

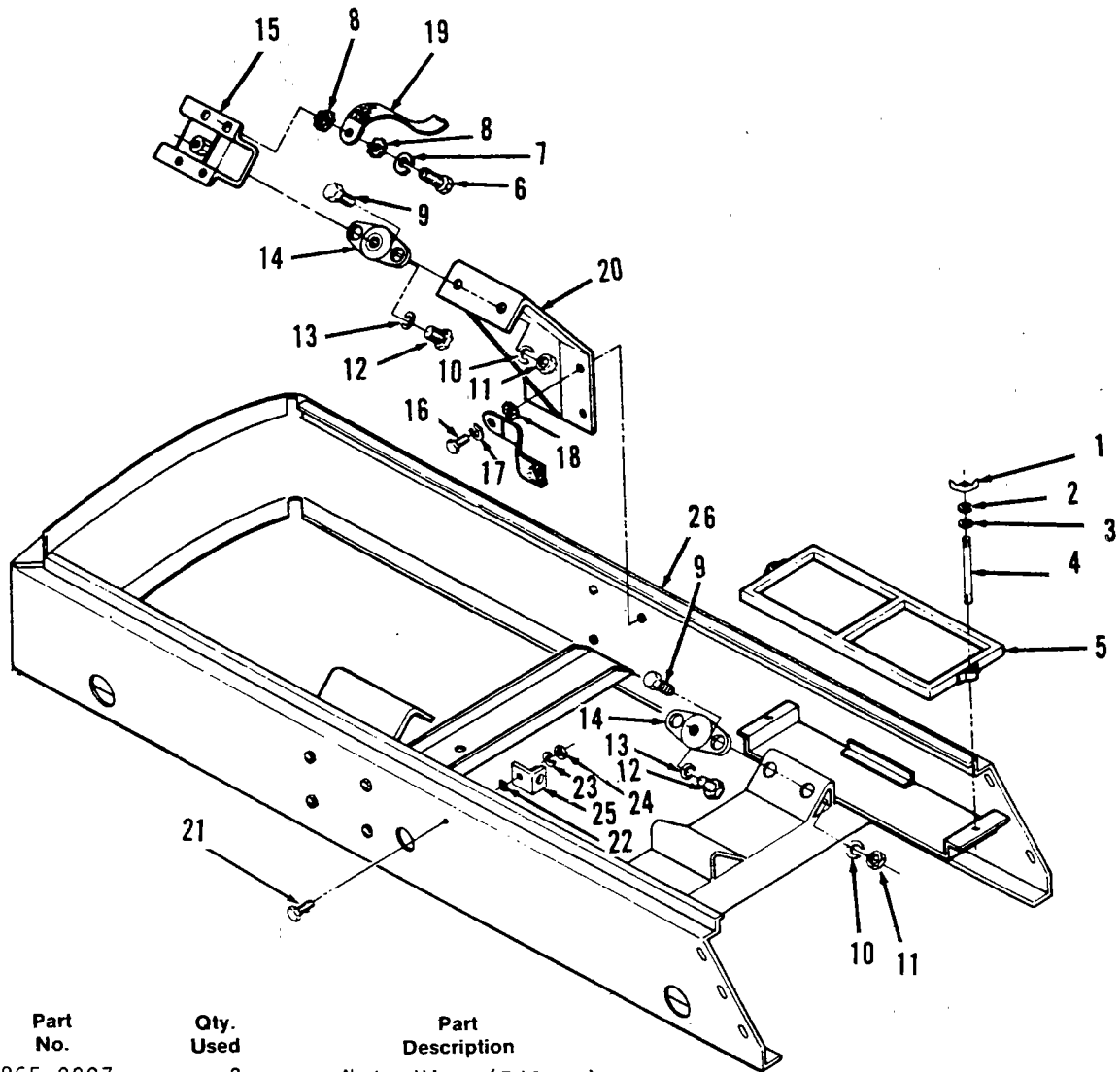
* - Parts included in Replacement Kit.
 # - Parts included in Replacement Kit.

Switch - Low Coolant Level



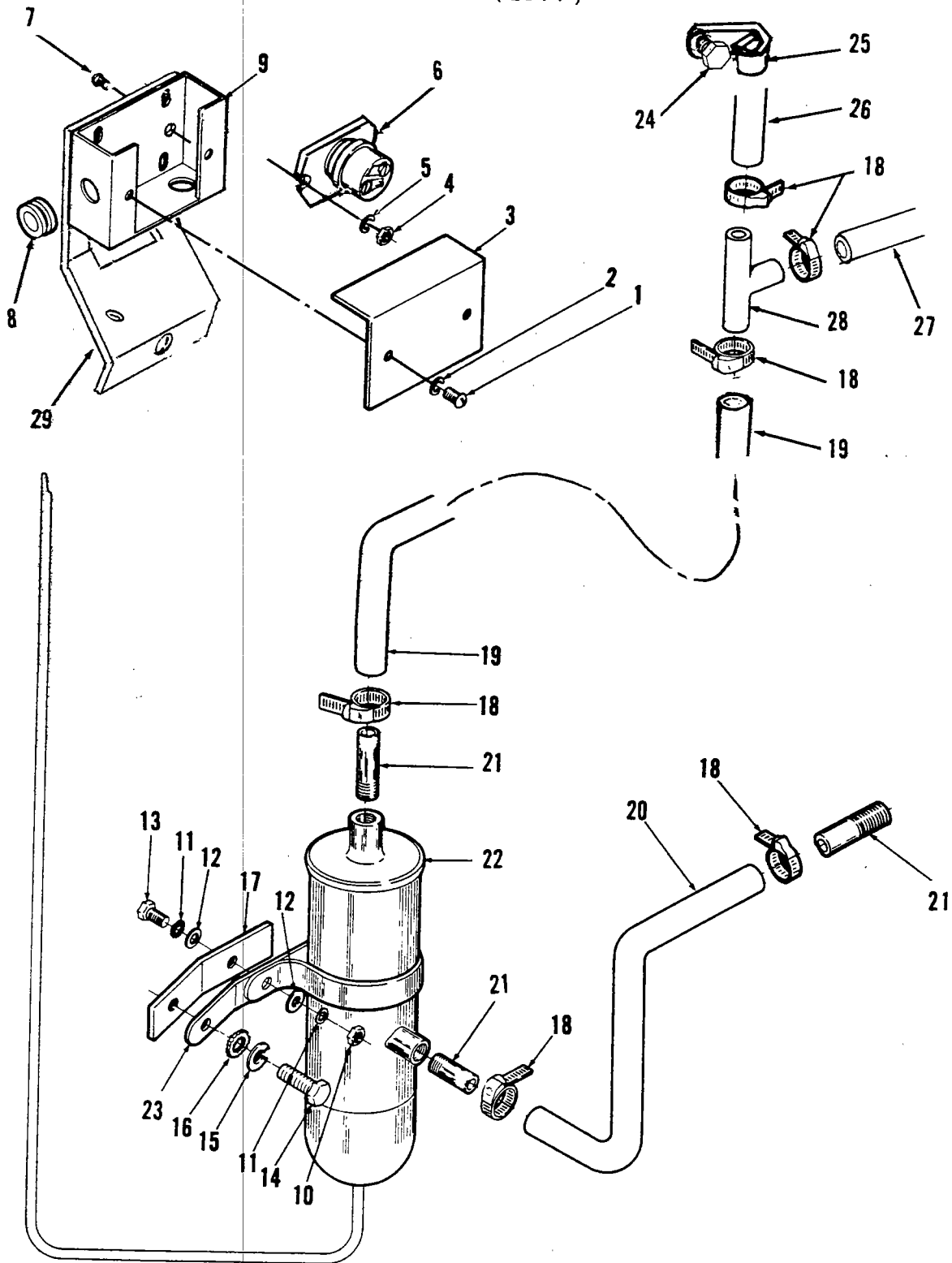
Ref. No.	Part No.	Qty. Used	Part Description
1	503-0446	4	Clamp, Hose
2	503-0743	1	Hose, Rubber (1/4"ID x 18"LG)
3	503-1118	1	Hose, Rubber (1/4"ID x 48"LG)
4	130-2053	2	Tube - Copper (1/4"OD x 2"LG)
5	502-0395	1	Connector, Pipe to Hose (1/8 NPT x 3/16"ID Hose)
6	505-0151	1	Bushing, Reducer - Hex, Brass (1/2 NPT x 1/8 NPT)
7	502-0313	1	Elbow, Pipe to Hose - 90 DEG (1/8 NPT x 1/4"ID Hose)
8	505-0007	1	Bushing, Reducer - Hex, Brass (1/4 NPT x 1/8 NPT)
9	821-0011	2	Screw, Self-locking - Hex Washer Head (1/4-20 x 7/8")
10	870-0212	2	Nut, Self-locking - Hex Washer Head (1/4-20)
11	193-0329	1	Switch, Coolant Level
12	502-0809	2	Adapter, Tube (Blind Hole Fitting) 5/8"OD x 1/4"OD Tube.
13	357-0030	2	Diode, Rectifier (Used in Wiring Harness Leads)

Chassis



Ref. No.	Part No.	Qty. Used	Part Description
1	865-0007	2	Nut, Wing (5/6-18)
2	850-0045	2	Washer, Lock - Spring (5/16")
3	526-0115	2	Washer, Flat (11/32"ID x 11/16"OD x 1/16"THK)
4	520-0231	2	Stud (5/16-18 x 5/16-24 x 7-9/16"LG)
5	416-0338	1	Frame, Holddown - Battery
6	800-0071	8	Screw, Cap - Hex Head (7/16-14 x 1")
7	850-0055	8	Washer, Lock - Spring (7/16")
8	856-0013	8	Washer, Lock - EIT (1/2")
9	800-0071	8	Screw, Cap - Hex Head (7/16-14 x 1")
10	850-0055	8	Washer, Lock - Spring (7/16")
11	862-0004	8	Nut, Hex (7/16-14)
12	800-0152	4	Screw, Cap - Hex Head (3/4-10 x 1-1/4")
13	850-0079	4	Washer, Lock - Spring (3/4")
14	402-0371	4	Mount, Vibration
15	403-1193	2	Support, Mounting - Engine
16	800-0071	8	Screw, Cap - Hex Head (7/16-14 x 1")
17	850-0055	8	Washer, Lock - Spring (7/16")
18	856-0013	8	Washer, Lock - EIT (1/2")
19	337-0090	1	Strap, Electrical - Ground
20	403-1194	2	Bracket, Mounting - Engine
21	800-0028	1	Screw, Cap - Hex Head (5/16-18 x 1")
22	856-0008	1	Washer, Lock - EIT (5/16")
23	850-0045	1	Washer, Lock - Spring (5/16")
24	862-0015	1	Nut, Hex (5/16")
25	332-1473	1	Terminal, Lug - Ground
26	402-1191	1	Chassis

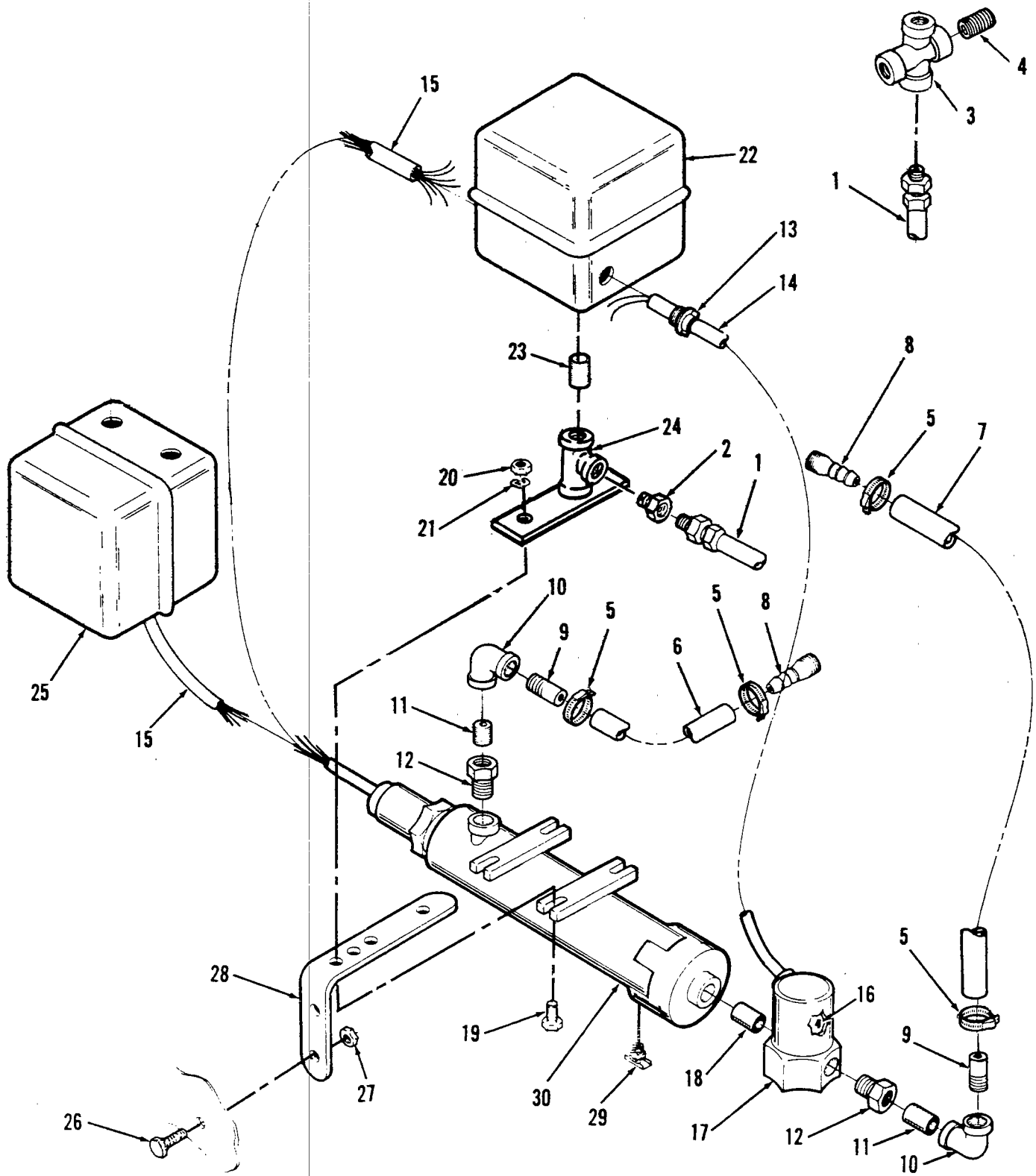
Heater - Engine Coolant (1977)



Heater - Engine Coolant (1977)

Ref. No.	Part No.	Qty. Used	Part Description
1	812-0076	2	Screw, Machine - Round Head (#8-32 x 5/16")
2	850-0025	2	Washer, Lock - Spring (#8)
3			Cover, Box
	333-0013	1	120 Volt Applications
	333-0056	1	240 Volt Applications
4	860-0005	2	Nut, Hex (#6-32)
5	850-0020	2	Washer, Lock - Spring (#6)
6			Switch, Thermostatic - Modified
	NFS	1	120/250 V, 25-40 A, SPST, 100 DEG Close, 130 DEG Open (Modified from 309-0285)
	NFS	1	120/250 V, 25-40 A, DPST, 100 DEG Close, 130 DEG Open (Modified from 309-0256)
7	812-0063	2	Screw, Self-locking - Hex (#6-32 x 1/2")
8	508-0008	2	Grommet
9			Box, Thermostat
	333-0012	1	120 Volt Applications
	333-0057	1	208/240 Volt Applications
10	862-0015	1	Nut, Hex (5/16-18)
11	856-0008	2	Washer, Lock - EIT (5/16")
12	526-0115	2	Washer, Flat (11/32"ID x 11/16"OD x 1/16"THK)
13	800-0031	1	Screw, Cap - Hex Head (5/16-18 x 1-1/2")
14	800-0072	1	Screw, Cap - Hex Head (7/16-14 x 1-1/4")
15	850-0055	1	Washer, Lock - Spring (7/16")
16	856-0012	1	Washer, Lock - EIT (7/16")
17	130-0755	1	Bracket, Mounting - Heater
18	503-0183	9	Clamp, Hose
19	503-0833	1	Hose, Rubber (5/8"ID x 24"LG)
20	503-0710	1	Hose, Rubber (5/8"ID x 22"LG)
21	505-0135	3	Nipple, Pipe - Half (3/8 NPT x 1-1/2"LG)
22			Heater, Electrical (Includes mounting strap)
	333-0052	1	1500 Watt, 120 VAC
	333-0053	1	2000 Watt, 120 Vac
	333-0073	1	2000 Watt, 208/240 VAC
23	NFS	1	Strap, Mounting
24	821-0029	1	Screw, Self-locking - Hex (3/8-16 x 3/4")
25	148-0274	1	Clamp, Loop
26	503-0568	1	Hose, Rubber (5/8"ID x 14"LG)
27	503-0832	1	Hose, Rubber (5/8"ID x 12"LG)
28	503-0831	1	Fitting, Y - Hose
29	333-0154	1	Bracket, Mounting - Box

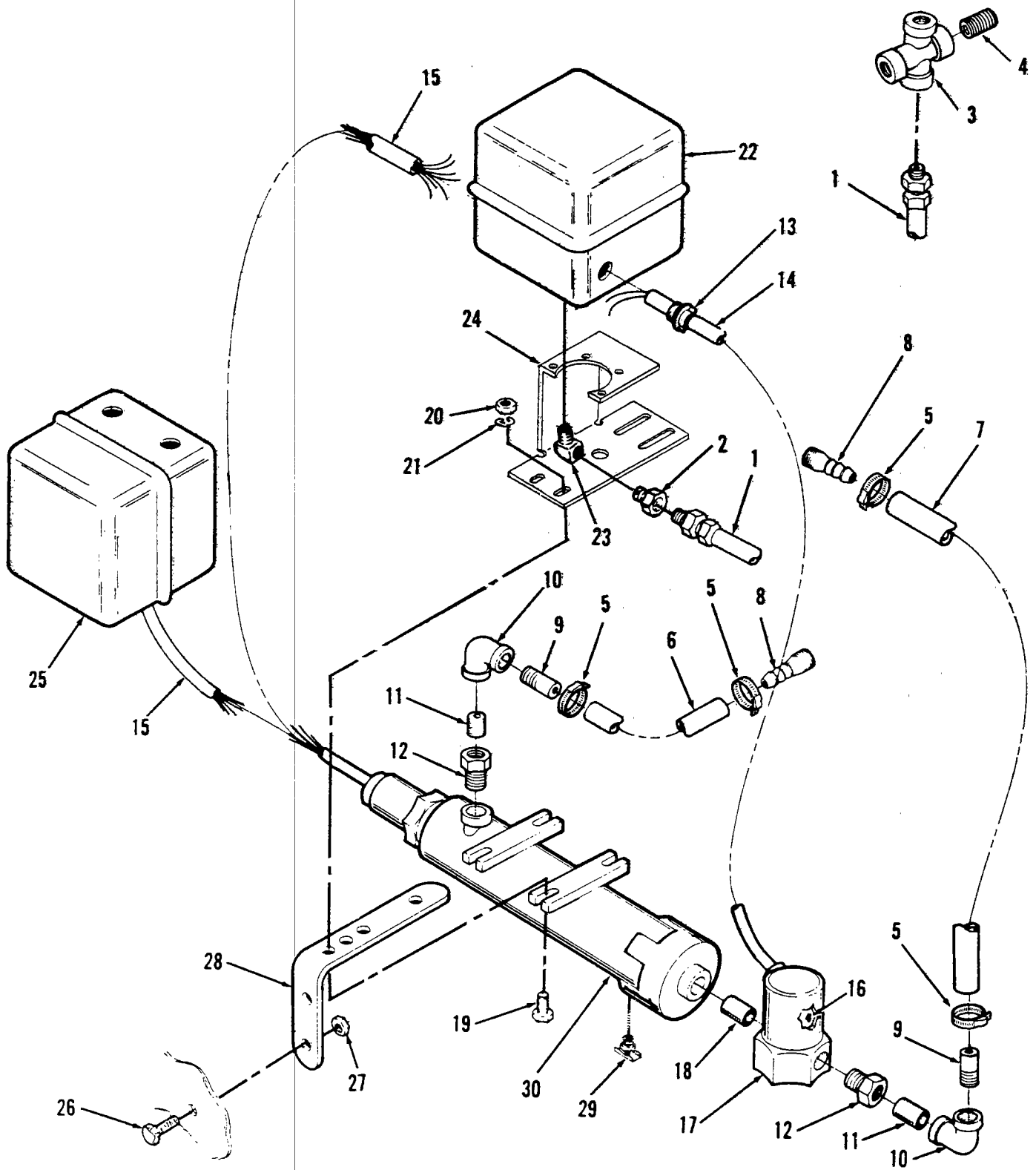
Heater - Engine Coolant (1978 thru 1982)



Heater - Engine Coolant
(1978 thru 1982)

Ref. No.	Part No.	Qty. Used	Part Description
1	501-0225	1	Line, Fuel - Flexible
2	505-0007	1	Bushing, Reducer - Hex (1/4 NPT x 1/8 NPT)
3	505-0763	1	Cross, Pipe (1/8 NPT)
4	505-0098	1	Nipple, Pipe - Close (1/8 NPT x 3/4"LG)
5	503-0183	4	Clamp, Hose
6	503-0832	1	Hose, Rubber (5/8"ID x 12"LG)
7	503-0843	1	Hose, Rubber (5/8"ID x 40"LG)
8	502-0613	2	Adapter, Hose to Pipe (1/4 NPT)
9	505-0135	2	Nipple, Pipe - Half (3/8 NPT x 1-1/2"LG)
10	505-0039	2	Elbow, Pipe - 90 DEG (3/8 NPT)
11	505-0101	2	Nipple, Pipe - Close (3/8 NPT x 1"LG)
12	505-0455	2	Bushing, Reducer - Hex (1 NPT x 3/8 NPT)
13	331-0027	6	Clamp, Cable
14	NFS		Cord, Electrical (2-#14, Type SO, 600 Volt)
15	NFS		Cable, Electrical (3-#12 or 4-#14, Type SO, 600 Volt)
16			Terminals (Select as Required)
	332-0014	4	#10
	332-0149	4	#8
	323-0957	4	Wire Nut
17	309-0304	1	Switch, Thermostatic
18	505-0004	1	Nipple, Pipe - Close (1 NPT x 1-1/4"LG)
19	800-0007	4	Screw, Cap - Hex Head (1/4-20 x 1")
20	862-0001	4	Nut, Hex (1/4-20)
21	850-0040	4	Washer, Lock - Spring (1/4")
22	309-0307	1	Switch, Pressure
23	505-0099	1	Nipple, Pipe - Close (1/4 NPT x 7/8"LG)
24	333-0142	1	Bracket, Support with Pipe Tee
25			Contactor, Electrical
	307-1460	1	230 VAC, 3 Pole
	307-1164	1	460 VAC, 3 Pole
26	821-0016	4	Screw, Self-locking - Hex Washer Head (5/16-18 x 3/4")
27	870-0257	4	Nut, Self-locking - Hex Washer Head (5/16-18)
28	130-1192	2	Bracket, Mounting - Heater
29	504-0003	1	Cock, Drain (1/4 NPT)
30			Heater, Electrical - Engine Coolant
	333-0158	1	2000 Watt, 115 VAC, 1 Phase
	333-0167	1	2000 Watt, 208 VAC, 1 Phase
	333-0148	1	2000 Watt, 208 VAC, 3 Phase
	333-0141	1	2000 Watt, 240 VAC, 1 Phase
	333-0176	1	2000 Watt, 380 VAC, 1 Phase
	333-0170	1	2000 Watt, 380 VAC, 3 Phase
	333-0147	1	2000 Watt, 480 VAC, 1 Phase
	333-0146	1	2000 Watt, 440 VAC, 3 Phase
	333-0172	1	2500 Watt, 440 VAC, 3 Phase

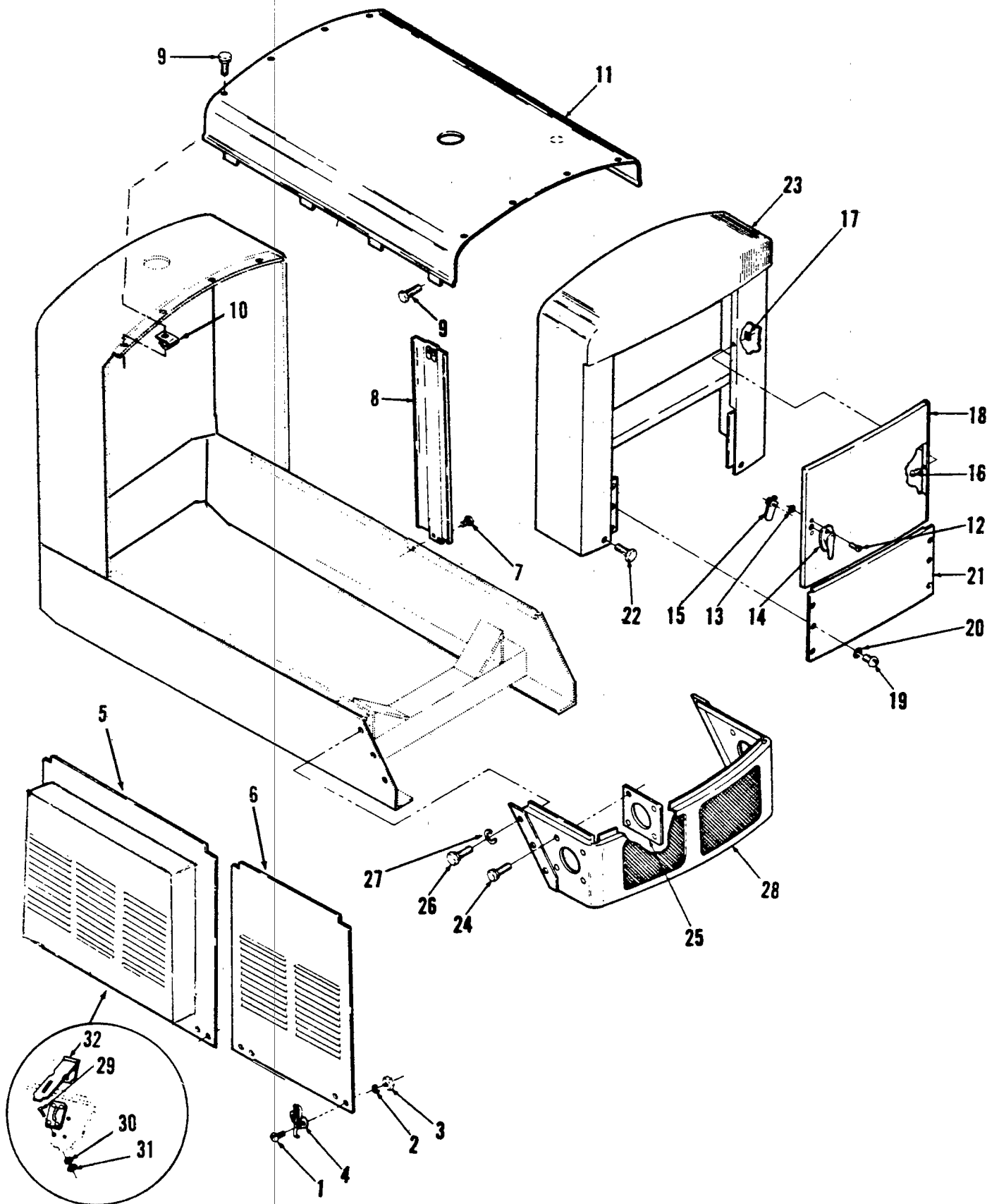
Heater - Engine Coolant (Begin 1983)



Heater - Engine Coolant
(Begin 1983)

Ref. No.	Part No.	Qty. Used	Part Description
1	501-0225	1	Line, Fuel - Flexible
2	505-0007	1	Bushing, Reducer - Hex (1/4 NPT x 1/8 NPT)
3	505-0763	1	Cross, Pipe (1/8 NPT)
4	505-0098	1	Nipple, Pipe - Close (1/8 NPT x 3/4"LG)
5	503-0183	4	Clamp, Hose
6	503-0832	1	Hose, Rubber (5/8"ID x 12"LG)
7	503-0843	1	Hose, Rubber (5/8"ID x 40"LG)
8	502-0613	2	Adapter, Hose to Pipe (1/4 NPT)
9	505-0135	2	Nipple, Pipe - Half (3/8 NPT x 1-1/2"LG)
10	505-0039	2	Elbow, Pipe - 90 DEG (3/8 NPT)
11	505-0101	2	Nipple, Pipe - Close (3/8 NPT x 1"LG)
12	505-0455	2	Bushing, Reducer - Hex (1 NPT x 3/8 NPT)
13	331-0027	6	Clamp, Cable
14	NFS		Cord, Electrical (2-#14, Type SO, 600 Volt)
15	NFS		Cable, Electrical (3-#12 or 4-#14, Type SO, 600 Volt)
16			Terminals (Select as Required)
	332-0014	4	#10
	332-0149	4	#8
	323-0957	4	Wire Nut
17	309-0304	1	Switch, Thermostatic
18	505-0004	1	Nipple, Pipe - Close (1 NPT x 1-1/4"LG)
19	800-0007	4	Screw, Cap - Hex Head (1/4-20 x 1")
20	862-0001	4	Nut, Hex (1/4-20)
21	850-0040	4	Washer, Lock - Spring (1/4")
22	309-0307	1	Switch, Pressure
23	502-0054	1	Elbow, Pipe - Street, 90 DEG, Brass (1/4 NPT)
24	333-0224	1	Bracket, Mounting - Pressure Switch
	812-0079	4	Screw, Machine - Round Head (#8-32 x 1/2")
	850-0025	4	Washer, Lock - Spring (#8)
25			Contactor, Electrical
	307-1460	1	230 VAC, 3 Pole
	307-1164	1	460 VAC, 3 Pole
26	821-0016	4	Screw, Self-locking - Hex Washer Head (5/16-18 x 3/4")
27	870-0257	4	Nut, Self-locking - Hex Washer Head (5/16-18)
28	130-1192	2	Bracket, Mounting - Heater
29	504-0003	1	Cock, Drain (1/4 NPT)
30			Heater, Electrical - Engine Coolant
	333-0158	1	2000 Watt, 115 VAC, 1 Phase
	333-0167	1	2000 Watt, 208 VAC, 1 Phase
	333-0148	1	2000 Watt, 208 VAC, 3 Phase
	333-0141	1	2000 Watt, 240 VAC, 1 Phase
	333-0176	1	2000 Watt, 380 VAC, 1 Phase
	333-0170	1	2000 Watt, 380 VAC, 3 Phase
	333-0147	1	2000 Watt, 480 VAC, 1 Phase
	333-0146	1	2000 Watt, 440 VAC, 3 Phase
	333-0172	1	2500 Watt, 440 VAC, 3 Phase

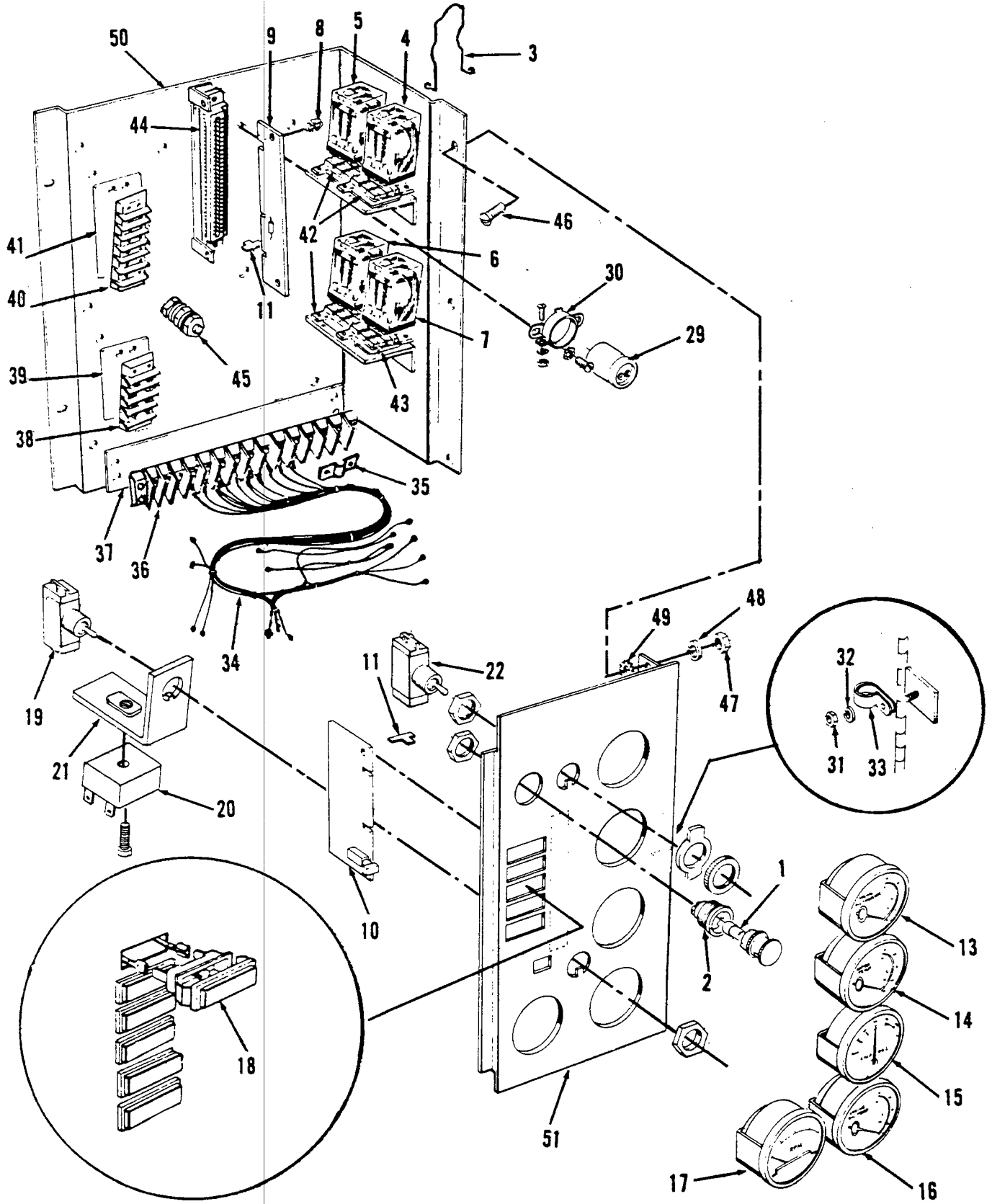
Set Housing



Set Housing

Ref. No.	Part No.	Qty. Used	Part Description
1	813-0098	16	Screw, Machine - Round Head (#10-32 x 3/8")
2	850-0030	16	Washer, Lock - Spring (#10)
3	870-0053	16	Nut, Hex (#10-32)
4	406-0105	8	Fastener, Door
5	405-1774	2	Door, Access - Louvered (Does Not Include Fastener)
6	405-1778	2	Panel, Access - Louvered (Does Not include Fastener)
7	821-0014	8	Screw, Self-locking - Hex Washer Head (5/16-18 x 1/2")
8	405-1776	2	Support, Housing - Center
9	821-0014	12	Screw, Self-locking - Hex Washer Head (5/16-18 x 1/2")
10	870-0113	12	Nut, Clinch (5/16-18)
11	405-1813	1	Panel, Housing - Top
12	812-0149	2	Screw, Machine - Round Head (1/4-20 x 9/16")
13	870-0232	2	Nut, Self-locking - Hex, with ET Lockwasher (1/4-20)
14	406-0157	1	Handle, Latch (With Key, PN 406-0565)
15	406-0089	1	Catch, Latch
16	809-0059	3	Screw, Tapping - Pan Head (1/4 x 1/2")
17	870-0106	3	Nut, Sheet Spring (1/4")
18	405-1777	1	Door, Access - Rear
19	813-0098	6	Screw, Machine - Round Head (#10-32 x 3/8")
20	850-0030	6	Washer, Lock - Spring (#10)
21	405-1780	1	Panel, Access - Rear
22	821-0014	8	Screw, Self-locking - Hex Washer Head (5/16-18 x 1/2")
23	405-1775	1	Panel, Housing - Rear
24	821-0010	8	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
25	403-0895	2	Plate, Cover
26	800-0048	6	Screw, Cap - Hex Head (3/8-16 x 3/4")
27	850-0050	6	Washer, Lock - Spring (3/8")
28	403-0894	1	Chassis -Rear
29	814-0079	28	Screw, Machine - Flat Head (#8-32 x 1/2")
30	850-0025	28	Washer, Lock - Spring (#8)
31	860-0008	28	Nut, Hex (#8-32)
32	406-0249	4	Hasp Set

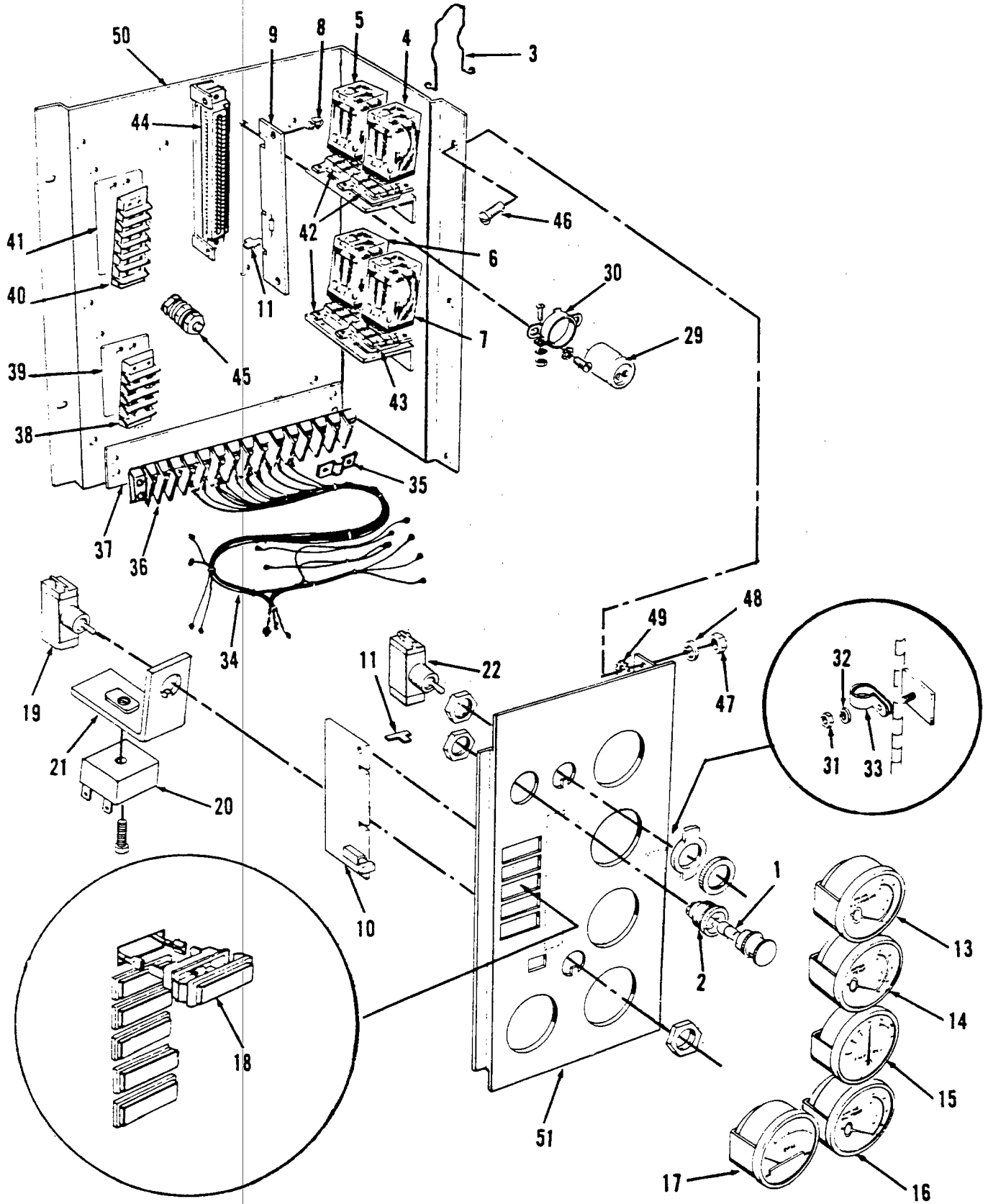
Control - Engine



Control - Engine

Ref. No.	Part No.	Qty. Used	Part Description
1	322-0004	1	Lamp, Incandescent (12 VDC)
2	322-0149	1	Lampholder
3	307-1157	4	Spring, Holddown - Relay
4	307-1058	1	Relay (Ignition)
5	307-1058	1	Relay (Start Disconnect)
6	307-1058	1	Relay (Run Alarm)
7	307-1061	1	Relay (Starter Protection)
8	518-0374	4	Fastener, Snap-In
9			Cranker (12 VDC)
	300-0733	1	Standard
	300-0714	1	Cycle
10			Monitor, Engine Control (12 VDC)
	300-0679	1	Standard (1 Fault Light)
	300-0730	1	Penn State (1 Fault Light)
	300-0681	1	Standard (5 Fault Light)
11	332-1276	2	Plug, Keying
13			Gauge, Oil Pressure (12 VDC)
	193-0243	1	Begin 1977
	193-0107	1	Thru 1976
14			Gauge, Water Temperature (12 VDC)
	193-0245	1	Begin 1977
	193-0106	1	Thru 1976
15	302-0061	1	Ammeter
16			Gauge, Oil Temperature (12 VDC)
	193-0248	1	Begin 1977
	193-0187	1	Thru 1976
17	302-0749	1	Tachometer
18			Light, Indicator - 14 VDC
	322-0107	1	Red - OVERCRANK
	322-0108	1	Red - LO OIL PRESS
	322-0109	1	Red - HI ENG TEMP
	322-0110	1	Red - LO ENG TEMP
	322-0111	1	Red - OVERSPEED
	322-0128	1	Red - FAULT
	322-0283	1	Red - SWITCH OFF
	322-0136	1	Red - (Blank, No Legend)
19			Switch, Toggle - Selector
	308-0138	1	Standard Sets
	308-0327	1	Penn State Sets
20	333-0194-01	1	Flasher (12 VDC)
	813-0105	1	Screw, Machine - Round Head (#10-32 x 1")
21	301-9154	1	Bracket, Mounting - Flasher
22	308-0002	1	Switch, Toggle (SPST)

Control - Engine

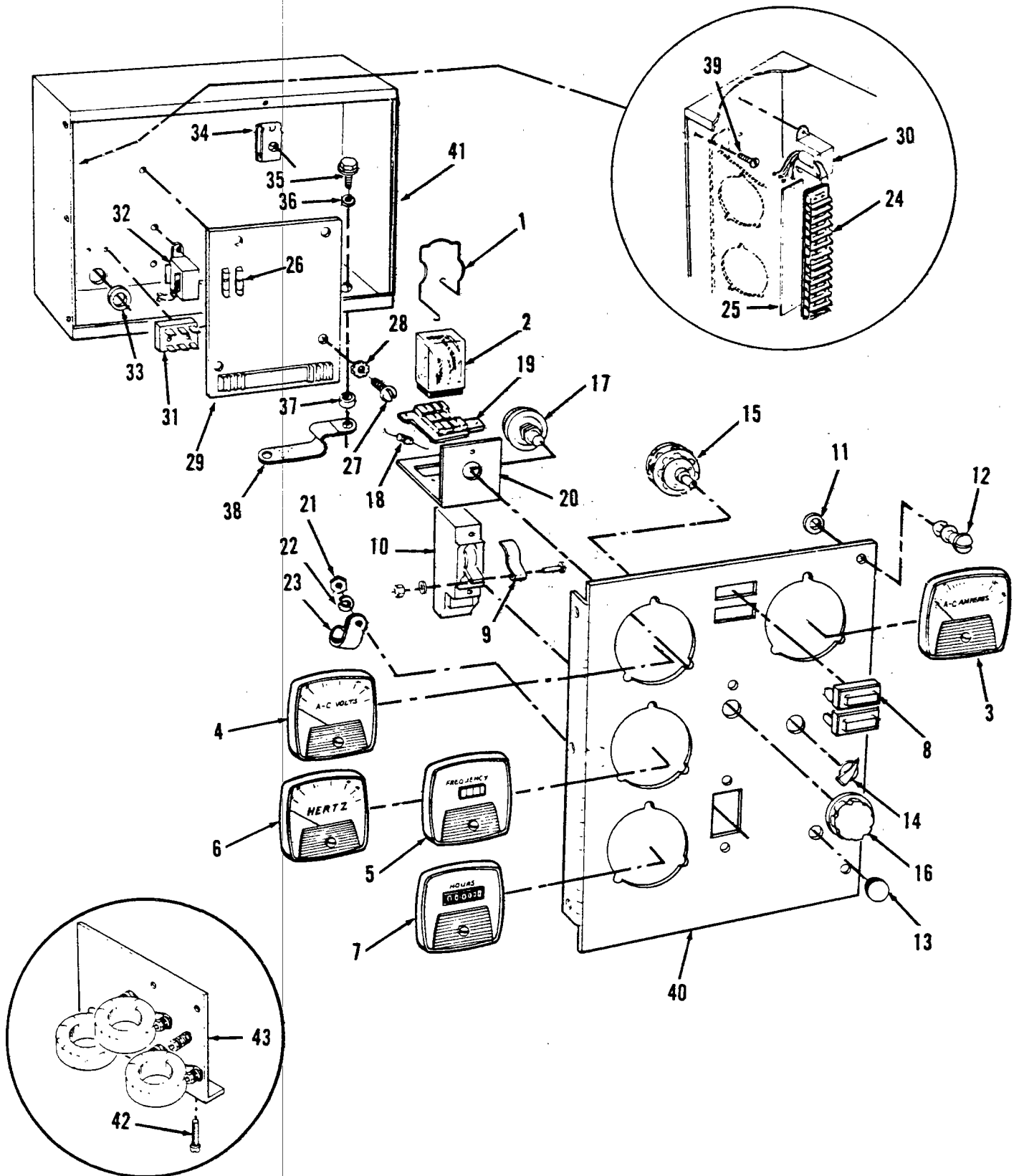


Control - Engine

Ref. No.	Part No.	Qty. Used	Part Description
29	356-0072	1	Capacitor, Fixed, Electrolytic (4000MFD, 30VDC)
	812-0061	1	Screw, Machine - Round Head (#6-32 x 3/8")
	853-0003	1	Washer, Lock - ET (#6)
	860-0006	1	Nut, Hex (#6-32)
30	356-0070	1	Clamp, Mounting - Capacitor
	812-0063	2	Screw, Machine - Round Head (#6-32 x 1/2")
	853-0003	2	Washer, Lock - ET (#6)
31	870-0053	1	Nut, Hex (#10-32)
32	850-0030	1	Washer, Lock - Spring (#10)
33	332-0051	1	Clamp, Loop
34			Harness, Wiring - Engine Control (Selection Required. Consult your Onan Parts Distributor)
35	332-1043	1	Jumper, Terminal
36			Block, Terminal
	332-1005	1	20 Place
	332-0795	1	16 Place
37			Strip, Marker
	332-1559	1	20 Place
	332-1271	1	16 Place
38	332-0537	1	Block, Terminal - 4 Place
39	332-1239	1	Strip, Marker - 4 Place
40	332-0699	1	Block, Terminal - 6 Place
41	332-1240	1	Strip, Marker - 6 Place
42	323-0765	3	Socket, Relay - 11 Place (W/O Terminals)
	332-1280	11	Terminal
43	323-0764	1	Socket, Relay - 8 Place (W/O Terminals)
	332-1280	8	Terminal
44	332-1271	1	Housing, Terminal - PC Board (W/O Terminals)
	332-1269	22	Terminal
45			Terminal Assembly, Ground (Includes Parts Marked *)
	871-0010	3	*Nut, Hex - Brass (#10-32)
	854-0010	2	*Washer, Lock - IT (#10)
	856-0003	1	*Washer, Lock - EIT (#10)
	850-0030	1	*Washer, Lock - Spring (#10)
	526-0049	2	*Washer, Flat - Brass (13/64"ID x 7/32"OD x 1/32"THK)
	815-0203	1	*Screw, Machine - Round Head, Brass (#10-32 x 7/8")
46	815-0026	5	Screw, Machine - Truss Head (#10-32 x 3/8")
47	870-0053	1	Nut, Hex (#01-32)
48	850-0030	1	Washer, Lock - Spring (#10)
49	856-0003	1	Washer, Lock - ET (#10)
50			Panel, Control - Engine (Selection Required, Consult your Onan Parts Distributor)
51	301-3253	1	Bracket, Mounting - Engine Control

* - Parts Included in Ground Terminal Assembly.

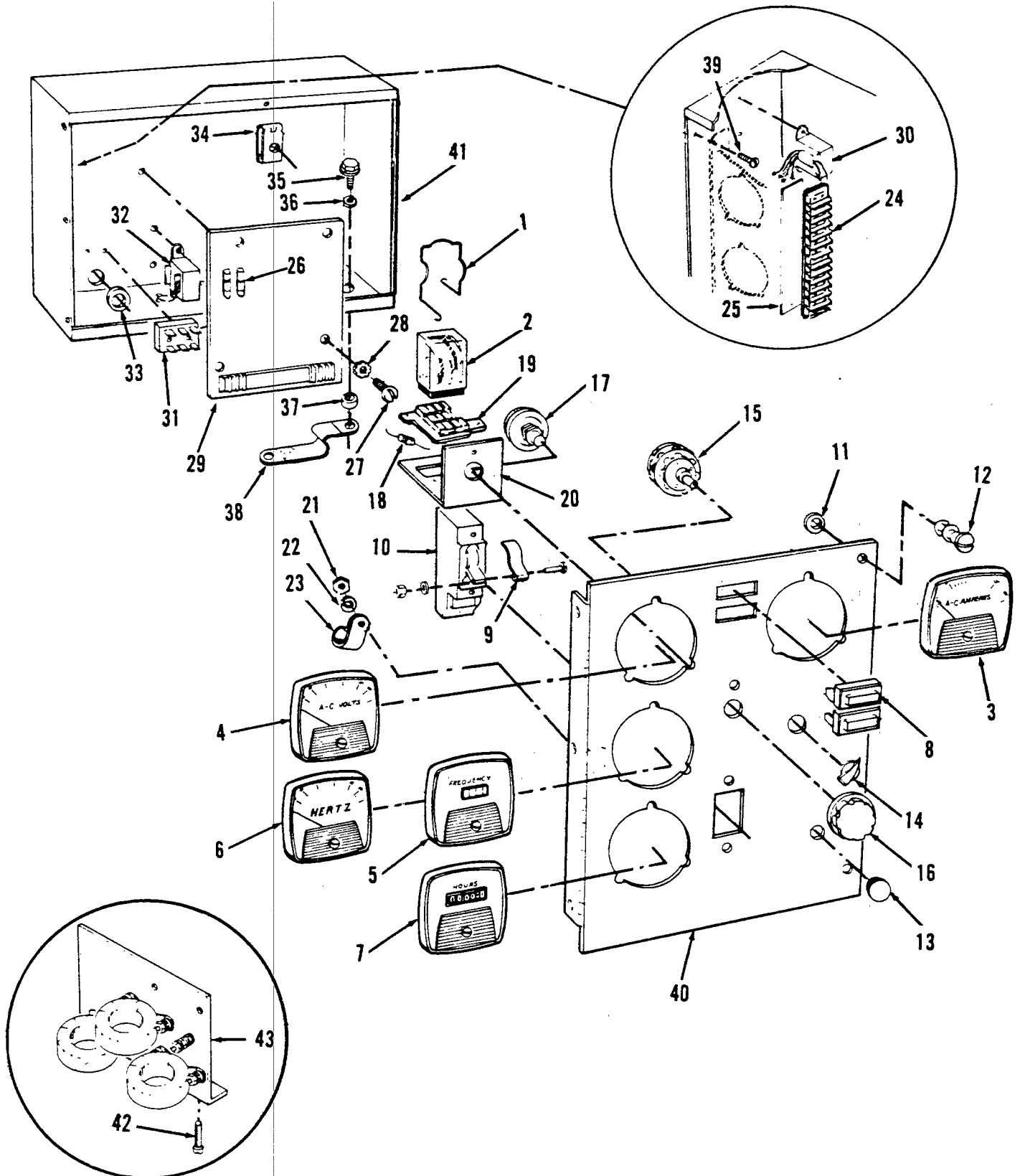
Control - Generator



Control - Generator

Ref. No.	Part No.	Qty. Used	Part Description
1	307-1157	1	Spring, Holddown - Relay
2	307-1061	1	Relay
3			Ammeter
	302-0406	1	0-50 AMP
	302-0408	1	0-75 AMP
	302-0410	1	0-100 AMP
	302-0411	1	0-200 AMP
	302-0412	1	0-250 AMP
	302-0413	1	0-300 AMP
	302-0605	1	0-400 AMP
	302-0719	1	0-75, 0-150 AMP
	302-0720	1	0-100, 0-200 AMP
	302-0721	1	0-150, 0-300 AMP
	302-0722	1	0-200, 0-400 AMP
	302-0723	1	0-250, 0-500 AMP
	302-0724	1	0-375, 0-750 AMP
4			Voltmeter
	302-0421	1	0-300 VAC
	302-0422	1	0-600 VAC
	302-0612	1	0-500 VAC
	302-0779	1	0-750 VAC
	302-0718	1	0-300, 0-600 VAC
5			Meter, Frequency - Reed Type
	302-0213	1	115 VAC, 60 HZ
	302-0221	1	230 VAC, 60 HZ
	302-0234	1	115 VAC, 50 HZ
	302-0256	1	230 VAC, 50 HZ
6			Meter, Frequency - Pointer Type
	302-0806	1	120 VAC, 60 HZ
	302-0810	1	208 VAC, 60 HZ
	302-0811	1	240 VAC, 60 HZ
7			Meter, Time Totalizing
	302-0466	1	60 HZ
	302-0469	1	50 HZ
8			Light, Indicator - 125 VAC
	322-0130	1	Red - Upper Scale
	322-0131	1	Red - Lower Scale
	322-0178	1	Red - Blank (No Legend)
9			Lock, Handle - Circuit
	815-0203	1	Screw, Machine - Round Head (#10-32 x 7/8")
	854-0010	1	Washer, Lock - ET (#10)
	871-0010	1	Nut, Hex (#10-32)
10			Breaker, Circuit
	320-0431	1	
	812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")
	850-0020	2	Washer, Lock - Spring (#6)
11	406-0334	2	Clip, Retaining - Turnbutton Fastener
12	406-0333	2	Stud, Turnbutton Fastener
13	517-0131	1	Plug, Plastic
14	303-0076	1	Knob, Pointer
15	308-0284	1	Switch, Selector
16	303-0032	1	Knob
17	303-0170	1	Rheostat
18	350-0556	1	Resistor, Fixed, Composition
19	323-0765	1	Socket, Relay - 11 Place (W/O Terminals)
	812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")
	853-0003	2	Washer, Lock - ET (#6)
	860-0005	1	Nut, Hex (#6-32)
	332-1280	11	Terminal
20	301-3244	1	Bracket, Mounting - Relay
21	870-0053	1	Nut, Hex (#10-32)
22	850-0030	1	Washer, Lock - Spring (#10)
23	332-0051	1	Clamp, Loop

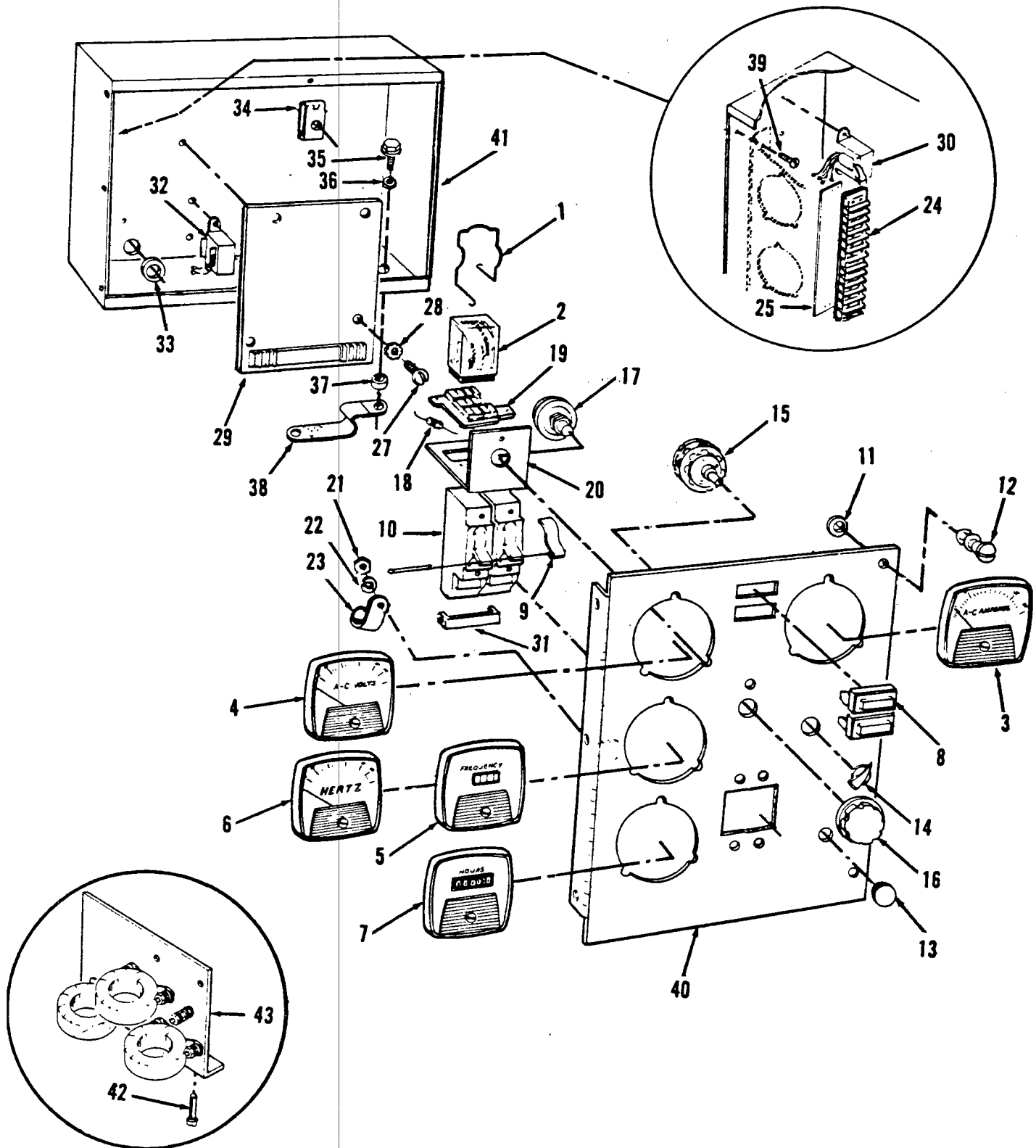
Control - Generator



Control - Generator

Ref. No.	Part No.	Qty. Used	Part Description
24	332-0607	1	Block, Terminal
	332-0795	1	12 Place
	812-0066	2	16 Place
	853-0003	2	Screw, Machine - Round Head (#6-32 x 3/4")
	850-0020	2	Washer, Lock - ET (#6)
25		2	Washer, Lock - Spring (#6)
	332-1242	1	Strip, Marker
	332-1248	1	16 Place
26	321-0204	2	12 Place
27	812-0065	4	Fuse, Cartridge (1/4 AMP)
28	853-0003	4	Screw, Machine - Round Head (#6-32 x 5/8")
29			Washer, Lock - ET (#6)
	332-1268	1	Regulator, Voltage
	332-1956	1	Used with 120 VAC Input Signal
30			Used with 240 VAC Input Signal
	315-0342	1	Transformer, Voltage
	315-0431	1	120 VAC
	812-0061	2	240 VAC
	853-0003	2	Screw, Machine - Round Head (#6-32 x 3/8")
31	305-0675	1	Washer, Lock - ET (#6)
	812-0070	2	Rectifier, Bridge
	850-0020	2	Screw, Machine - Round Head (#6-32 x 1-1/4")
32	315-0384	1	Washer, Lock - Spring (#6)
	812-0061	2	Reactor
	853-0003	2	Screw, Machine - Round Head (#6-32 x 3/8")
33	508-0001	1	Washer, Lock - ET (#6)
34	406-0332	2	Grommet
35	800-0045	4	Receptacle, Turnbutton Fastener
36	850-0045	4	Screw, Cap - Hex Head (5/16-18 x 3/8")
37	402-0070	4	Washer, Lock - Spring (5/16")
38	337-0049	1	Dampener, Vibration
39	815-0026	3	Strap, Electrical - Ground
40			Screw, Machine - Truss Head (#10-32 x 3/8")
41	301-3158	1	Panel, Control - Generator (Selection Required, Consult your Onan Parts Distributor)
42	821-0010	2	Box, Control
43			Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
			Transformer, Current (See Separate Page for Components)

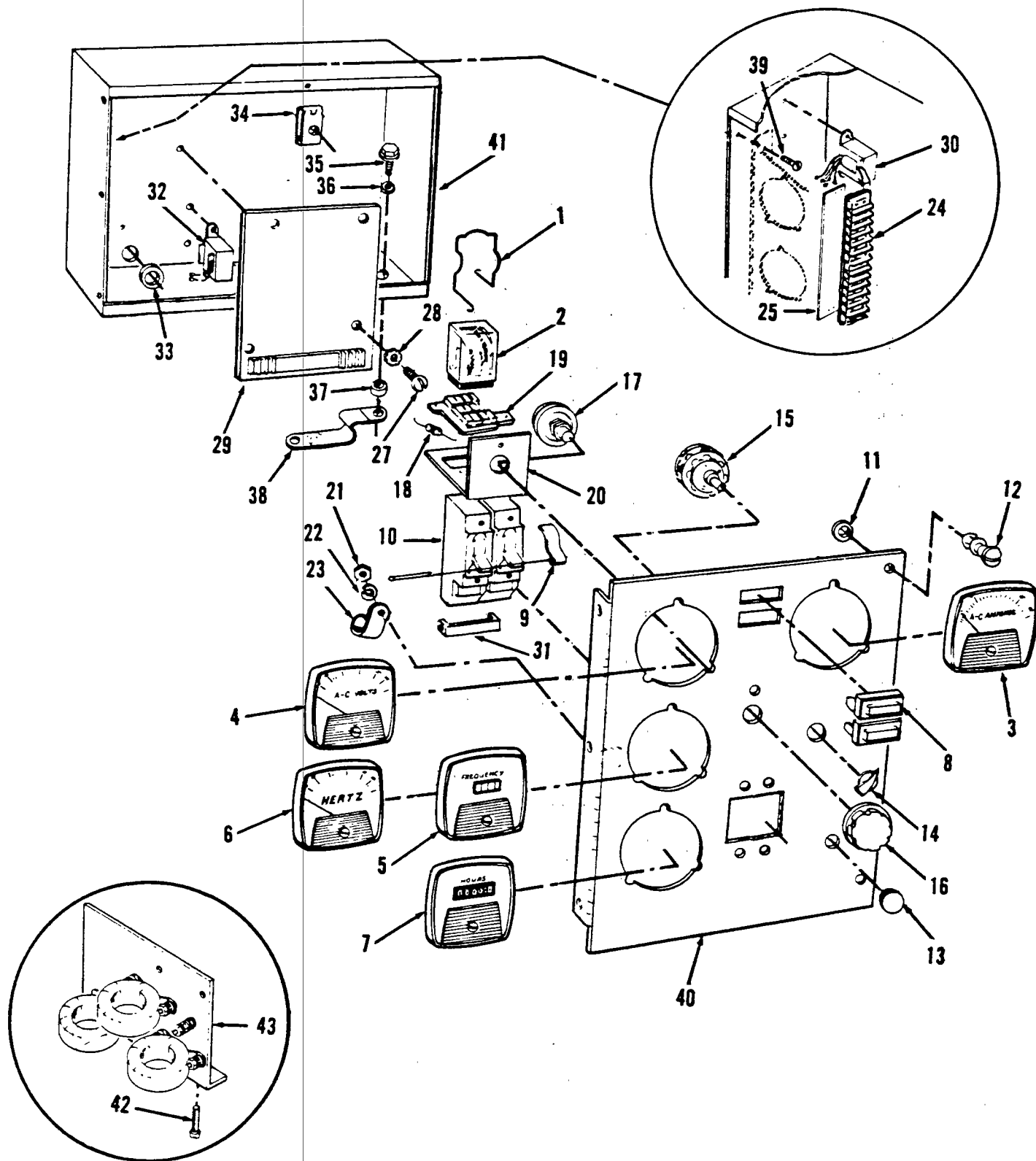
Control - Generator (Switching Regulator)



Control - Generator (Switching Regulator)

Ref. No.	Part No.	Qty. Used	Part Description
1	307-1157	1	Spring, Holddown - Relay
2	307-1061	1	Relay
3			Ammeter
	302-0406	1	0-50 AMP
	302-0408	1	0-75 AMP
	302-0410	1	0-100 AMP
	302-0411	1	0-200 AMP
	302-0412	1	0-250 AMP
	302-0413	1	0-300 AMP
	302-0605	1	0-400 AMP
	302-0719	1	0-75, 0-150 AMP
	302-0720	1	0-100, 0-200 AMP
	302-0721	1	0-150, 0-300 AMP
	302-0722	1	0-200, 0-400 AMP
	302-0723	1	0-250, 0-500 AMP
	302-0724	1	0-375, 0-750 AMP
4			Voltmeter
	302-0421	1	0-300 VAC
	302-0422	1	0-600 VAC
	302-0612	1	0-500 VAC
	302-0779	1	0-750 VAC
5			Meter, Frequency - Reed Type
	302-0213	1	115 VAC, 60 HZ
	302-0221	1	230 VAC, 60 HZ
	302-0234	1	115 VAC, 50 HZ
	302-0256	1	230 VAC, 50 HZ
6			Meter, Frequency - Pointer Type
	302-0806	1	120 VAC
	302-0810	1	208 VAC
	302-0811	1	240 VAC
7			Meter, Time Totalizing
	302-0466	1	60 HZ
	302-0469	1	50 HZ
8			Light, Indicator - 125 VAC
	322-0130	1	Red - Upper Scale
	322-0131	1	Red - Lower Scale
	322-0178	1	Red - Blank (No Legend)
9	320-0307	1	Lock, Handle - Circuit Breaker
10	320-0455	2	Breaker, Circuit
	812-0061	4	Screw, Machine - Round Head (#6-32 x 3/8")
	850-0020	4	Washer, Lock - Spring (#6)
11	406-0334	2	Clip, Retaining - Turnbutton Fastener
12	406-0333	2	Stud, Turnbutton Fastener
13	517-0131	1	Plug, Plastic
14	303-0076	1	Knob, Pointer
15	308-0284	1	Switch, Selector
16	303-0032	1	Knob
17	303-0170	1	Rheostat
18	350-0556	1	Resistor, Fixed Composition
19	323-0765	1	Socket, Relay - 11 Place (W/O Terminals)
	812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")
	853-0003	2	Washer, Lock - ET (#6)
	332-1280	11	Terminal
20	301-3244	1	Bracket, Mounting - Relay
21	870-0053	1	Nut, Hex (#10-32)
22	850-0030	1	Washer, Lock - Spring (#10)
23	332-0051	1	Clamp, Loop

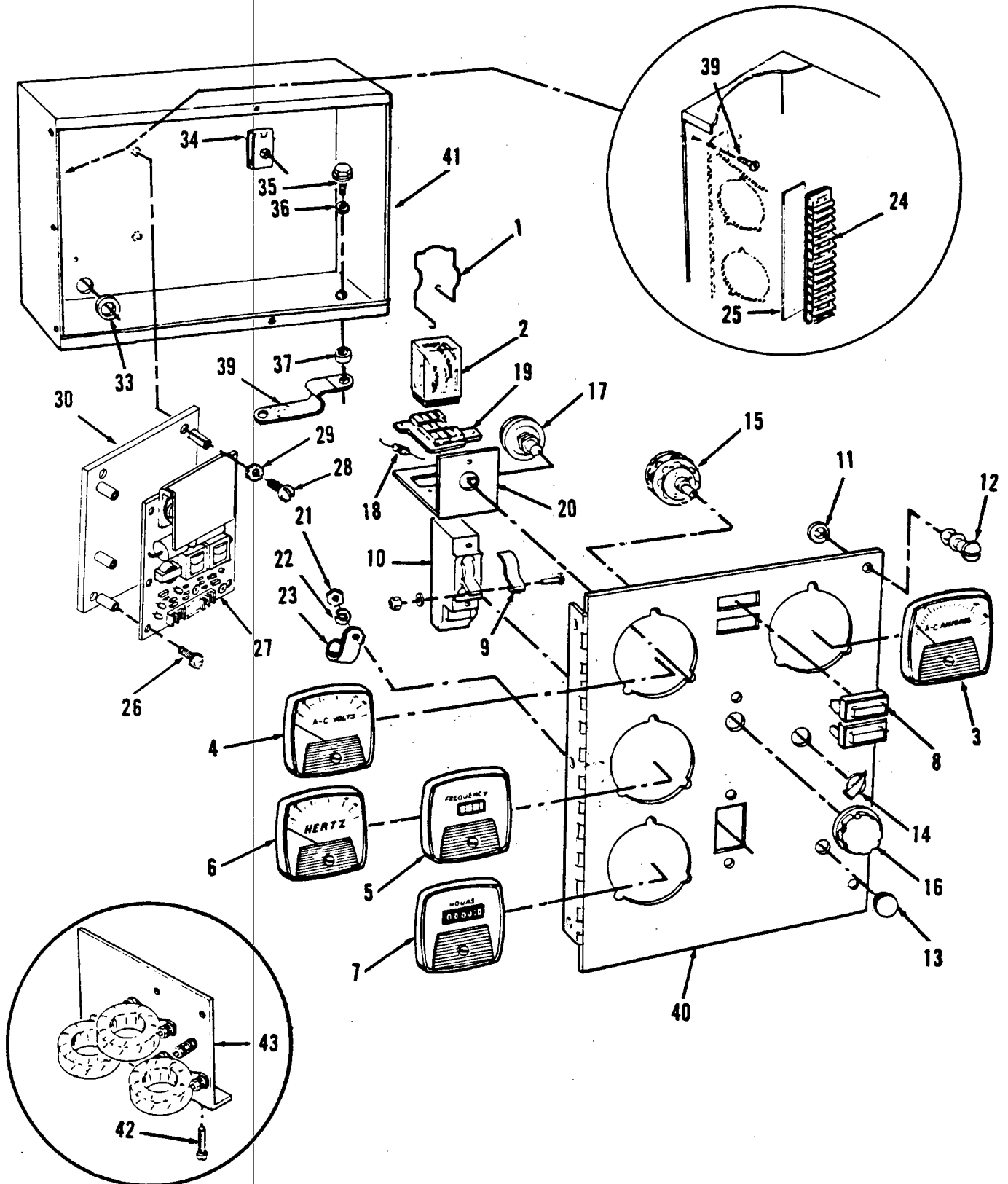
Control - Generator (Switching Regulator)



Control - Generator
(Switching Regulator)

Ref. No.	Part No.	Qty. Used	Part Description
24			Block, Terminal
	332-0607	1	12 Place
	332-0795	1	16 Place
	812-0066	2	Screw, Machine - Round Head (#6-32 x 3/4")
	853-0003	2	Washer, Lock - ET (#6)
	850-0020	2	Washer, Lock - Spring (#6)
25			Strip, Marker
	332-1242	1	16 Place
	332-1248	1	12 Place
27	812-0065	4	Screw, Machine - Round Head (#6-32 x 5/8")
28	853-0003	4	Washer, Lock - Spring (#6)
29			Regulator, Voltage - Switching
	300-1928	1	Semi-Frequency Sensitive Type
	300-1929	1	Voltage Sensitive Type
	300-1930	1	Frequency Sensitive Type
30	315-0431	1	Transformer, Voltage
	812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")
	853-0003	2	Washer, Lock - ET (#6)
31	320-0202	1	Tie Bar - Circuit Breaker
32	315-0384	2	Reactor
	812-0061	4	Screw, Machine - Round Head (#6-32 x 3/8")
	853-0003	4	Washer, Lock - ET (#6)
33	508-0001	1	Grommet
34	406-0332	2	Receptacle, Turnbutton Fastener
35	800-0045	4	Screw, Cap - Hex Head (5/16-18 x 3/8")
36	850-0045	4	Washer, Lock - Spring (5/16")
37	402-0070	4	Dampener, Vibration
38	337-0049	1	Strap, Ground
39	815-0026	3	Screw, Machine - Truss Head (#10-32 x 3/8")
40			Panel, Control - Generator (Selection Required, Consult your Onan Parts Distributor)
41	301-3158	1	Box, Control
42	821-0010	2	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
43			Transformer, Current (See Separate Page for Components)

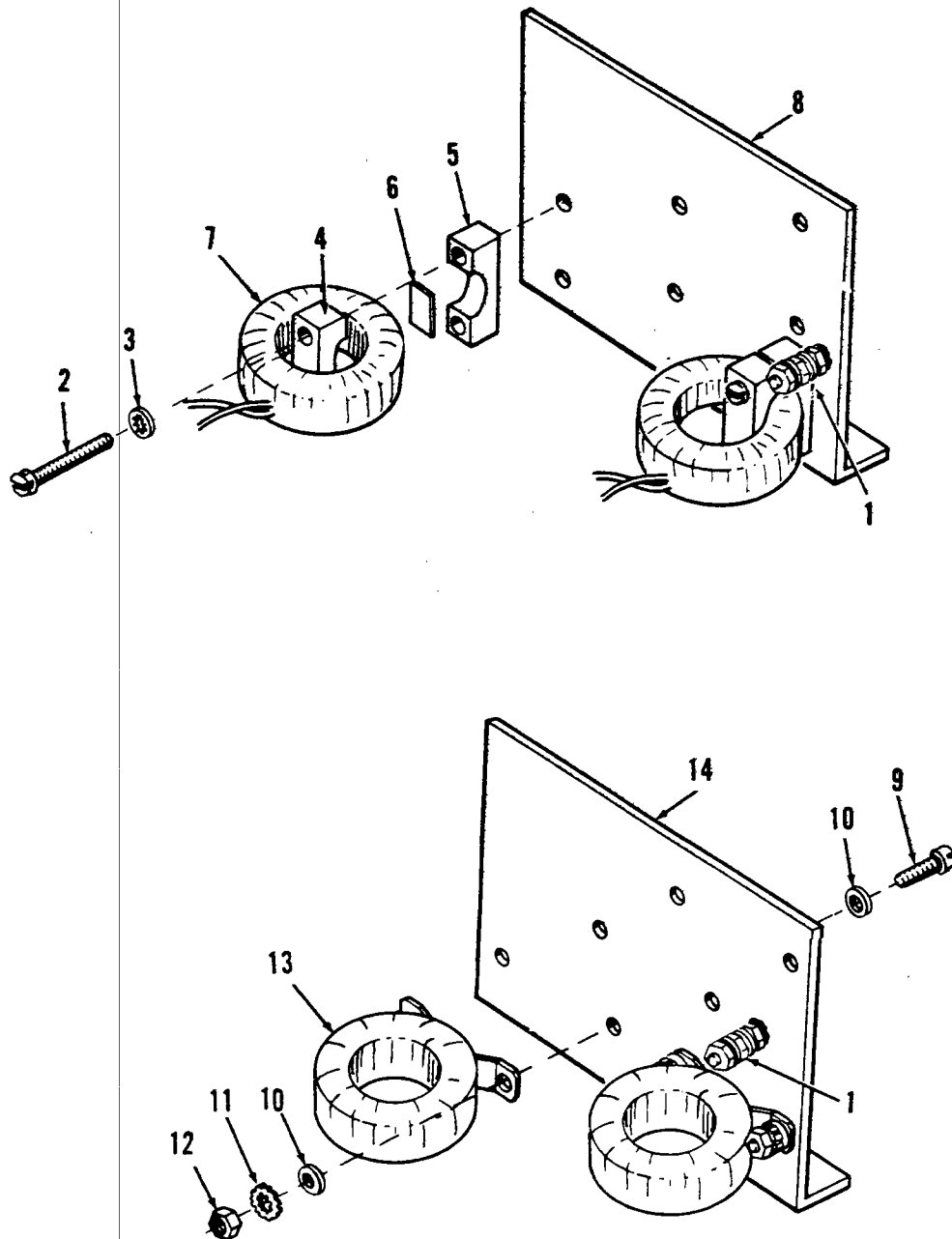
Control - Generator (Torque Matched Regulator)



Control - Generator
(Torque Matched Regulator)

Ref. No.	Part No.	Qty. Used	Part Description
24			Block, Terminal
	332-0607	1	12 Place
	332-0795	1	16 Place
	812-0066	2	Screw, Machine - Round Head (#6-32 x 3/4")
	850-0020	2	Washer, Lock - Spring (#6)
	853-0003	2	Washer, Lock - IT (#6)
25			Strip, Marker
	332-1248	1	12 Place
	332-1242	1	16 Place
26	815-0544	6	Screw, Machine - Round Head with IT Lockwasher (#6-32 x 1/2")
27	300-2880	1	Regulator, Voltage - Torque Matched
28	812-0065	4	Screw, Machine - Round Head (#6-32 x 5/8")
29	853-0003	4	Washer, Lock - ET (#6)
30	301-9315	1	Bracket, Mounting - Voltage Regulator
33	508-0001	1	Grommet
34	406-0332	2	Receptacle, Turnbutton Fastener
35	800-0045	4	Screw, Cap - Hex Head (5/16-18 x 3/8")
36	850-0045	4	Washer, Lock - Spring (5/16")
37	402-0070	4	Dampener, Vibration
38	337-0049	1	Strap, Electrical - Ground
39	815-0026	3	Screw, Machine - Truss Head (#10-32 x 3/8")
40			Panel, Control - Generator (Selection Required, Consult your Onan Parts Distributor)
41	301-3158	1	Box, Control
42	821-0010	2	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
43			Transformer, Current (See Separate Page for Components)

Current Transformer

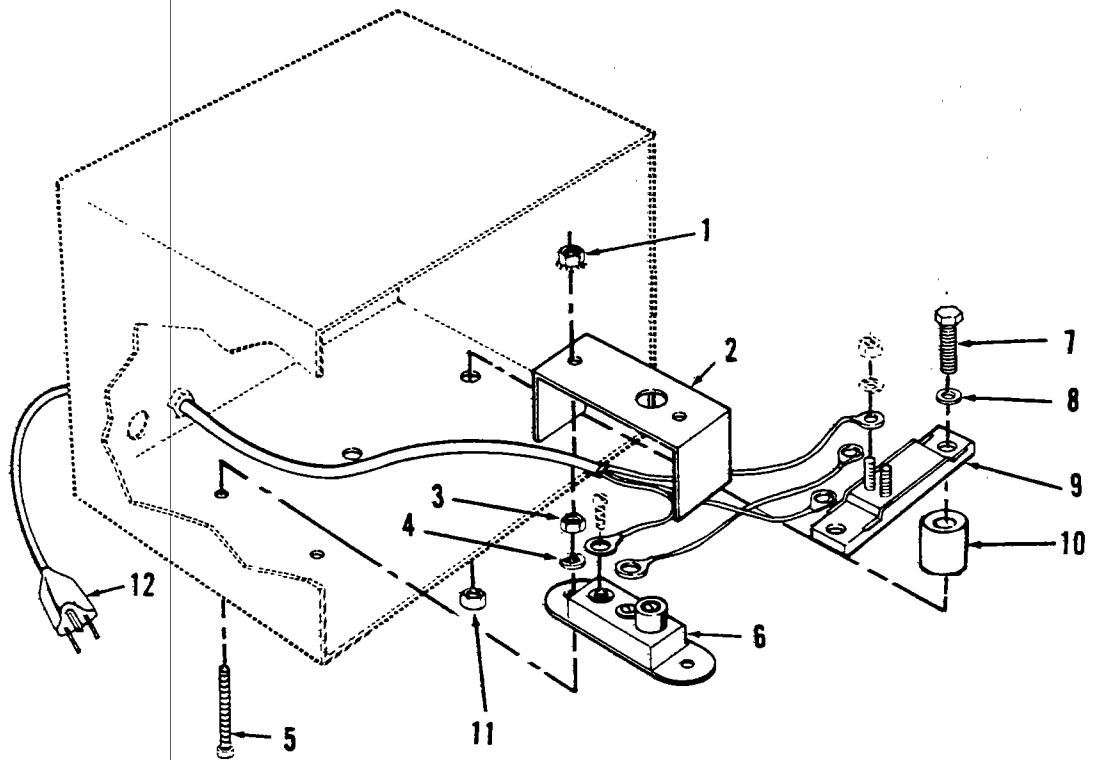


Current Transformer

Ref. No.	Part No.	Qty. Used	Part Description
1	871-0010	3	Terminal Assembly, Ground (Includes Parts Marked *)
	854-0010	2	*Nut, Hex - Brass (#10-32)
	856-0003	1	*Washer, Lock - IT (#10)
	850-0030	1	*Washer, Lock - EIT (#10)
	526-0049	2	*Washer, Lock - Spring (#10)
	815-0203	1	*Washer, Flat - Brass (13/64"ID x 7/32"OD x 1/32"THK)
			*Screw, Machine - Round Head, Brass (#10-32 x 7/8")
2	813-0110	6	Screw, Machine - Round Head (#10-32 x 2")
3	854-0010	6	Washer, Lock - IT (#10)
4	302-0235	3	Clamp, Upper
5	302-0236	3	Clamp, Lower
6	302-0253	6	Shim
7			Transformer, Current
	302-0117	3	Ratio 50/5, 3 VA
	302-0076	3	Ratio 75/5, 2 VA
	302-0078	3	Ratio 100/5, 2 VA
	302-0079	3	Ratio 150/5, 1 VA
	302-0106	3	Ratio 200/5, 1 VA
	302-0209	3	Ratio 250/5, 1 VA
	302-0107	3	Ratio 300/5, 1 VA
8	302-0729	1	Bracket, Mounting - Transformer
9	813-0100	6	Screw, Machine - Round Head (#10-32 x 1/2")
10	526-0008	6	Washer, Flat (13/64"ID x 7/16"OD x 1/32"THK)
11	856-0003	6	Washer, Lock - EIT (#10)
12	870-0053	6	Nut, Hex (#10-32)
13			Transformer, Current
	302-0952	3	Ratio 75/5, 2 VA
	302-0864	3	Ratio 150/5, 2 VA
	302-0865	3	Ratio 200/5, 2 VA
	302-0866	3	Ratio 250/5, 2 VA
	302-0608	3	Ratio 400/5, 2 VA
	302-0547	3	Ratio 500/5, 2 VA
	302-0471	3	Ratio 750/5, 2 VA
14	302-0764	1	Bracket, Mounting - Transformer

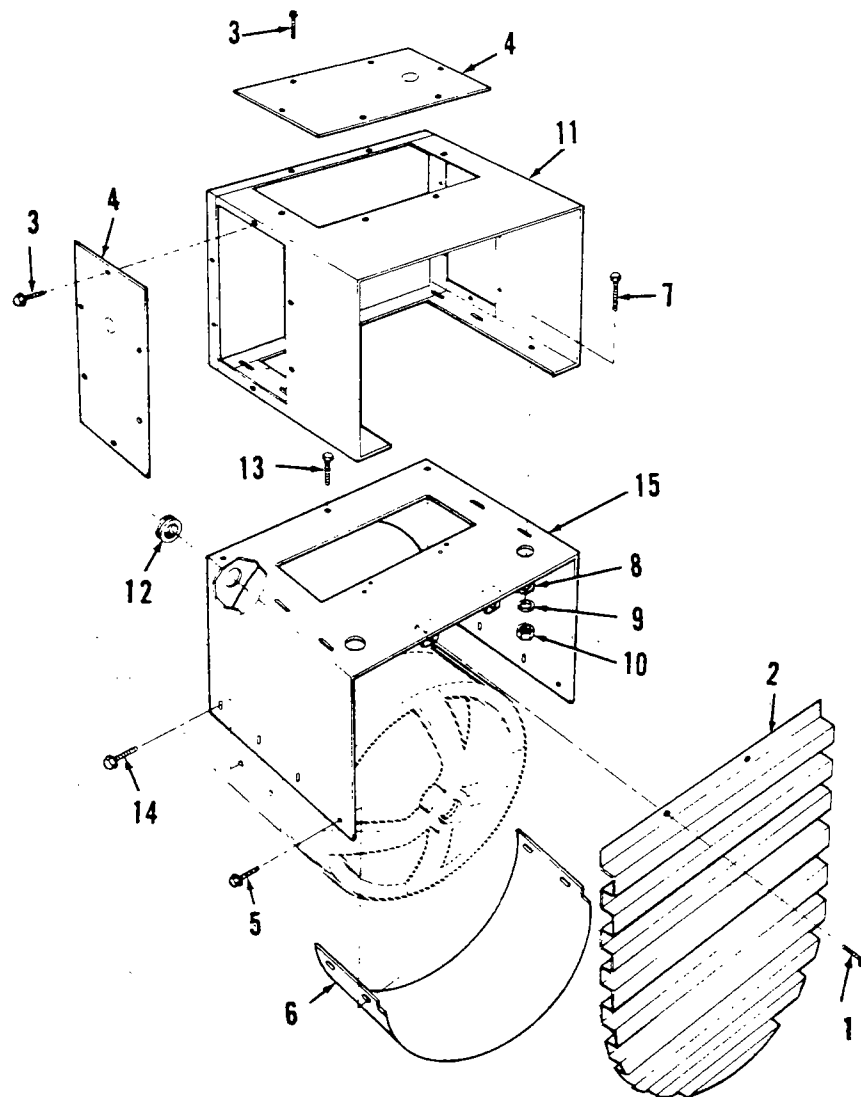
* - Parts Included in Ground Terminal Assembly.

CONTROL HEATER



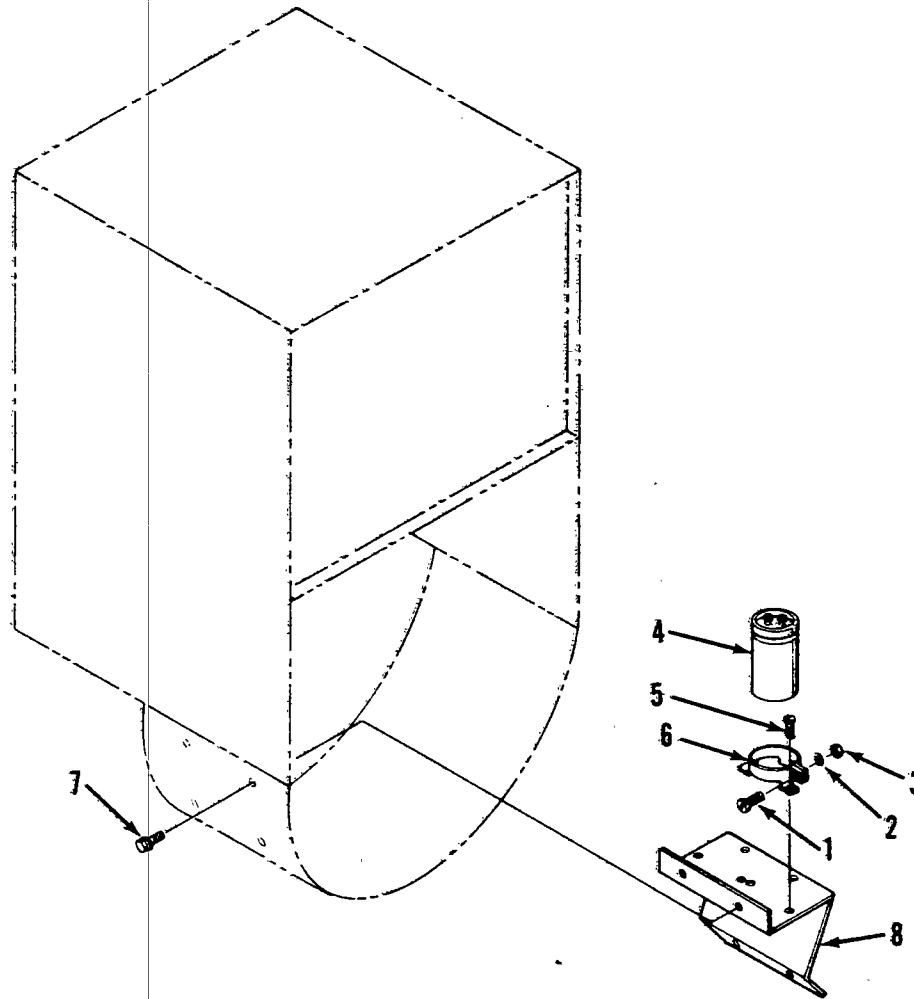
Ref. No.	Part No.	Qty. Used	Part Description
1	870-0183	2	Nut, Self-locking - Hex W/ET Washer (#6-32)
2	301-1886	1	Cover, Thermostat
3	860-0006	2	Nut, Hex (#6-32)
4	854-0006	2	Washer, Lock - IT (#6)
5	812-0070	2	Screw, Machine - Round Head (#6-32 x 1-1/4")
6	309-0128	1	Thermostat - Adjustable
7	800-0034	2	Screw, Cap - Hex Head (5/16-18 x 2-1/4")
8	526-0113	2	Washer, Flat (5/16")
9	333-0151	1	Heater, Electrical - 75 Watt, 120 VAC; 300 Watt, 240 VAC
10	130-1107	2	Spacer, Sleeve
11	870-0257	2	Nut, Self-locking, Hex (5/16-18)
12	335-0161	1	Cable, Electrical

Control Housing



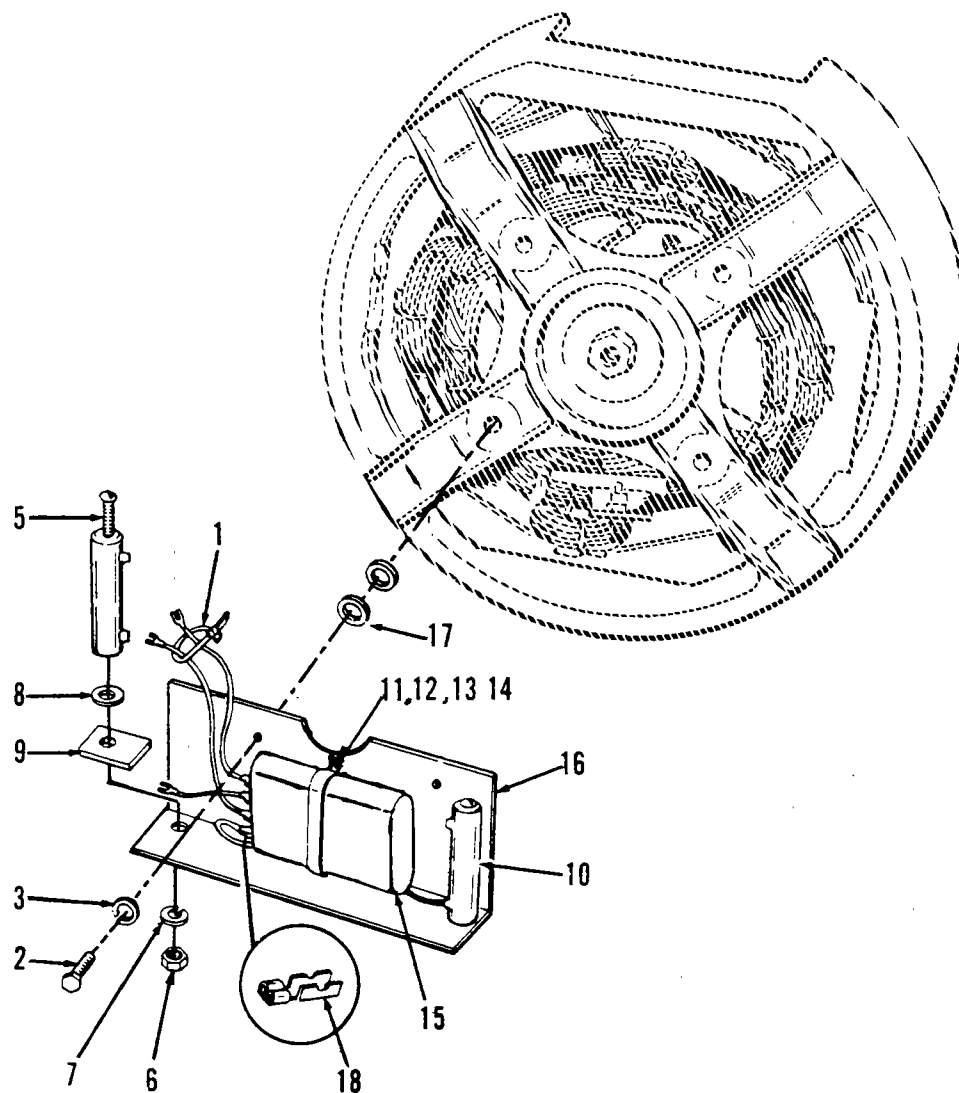
Ref. No.	Part No.	Qty. Used	Part Description
1	821-0010	8	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
2	234-0370	1	Grill, Air - Generator Inlet
3	815-0350	18	Screw, Tapping - Hex Washer Head (#10-32 x 3/8")
4	301-3156	3	Panel Access
5	821-0010	4	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
6	234-0361	1	Wrapper, End Bell
7	821-0018	6	Screw, Self-locking - Hex Washer Head (1/4-20 x 5/8")
8	856-0006	1	Washer, Lock - EIT (1/4")
9	526-0018	5	Washer, Flat (17/64"ID x 5/8"OD x 1/16"THK)
10	870-0212	6	Nut, Hex (1/4-20)
11	301-3155	1	Housing, Control Box
12			Grommet
	508-0203	1	Thru October 1984
	508-0051	1	Begin November 1984
13	821-0010	1	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
14	821-0014	8	Screw, Self-locking - Hex Washer Head (5/16-18 x 1/2")
15	301-3154	1	Saddle, Control Box Mounting

Capacitor Assembly



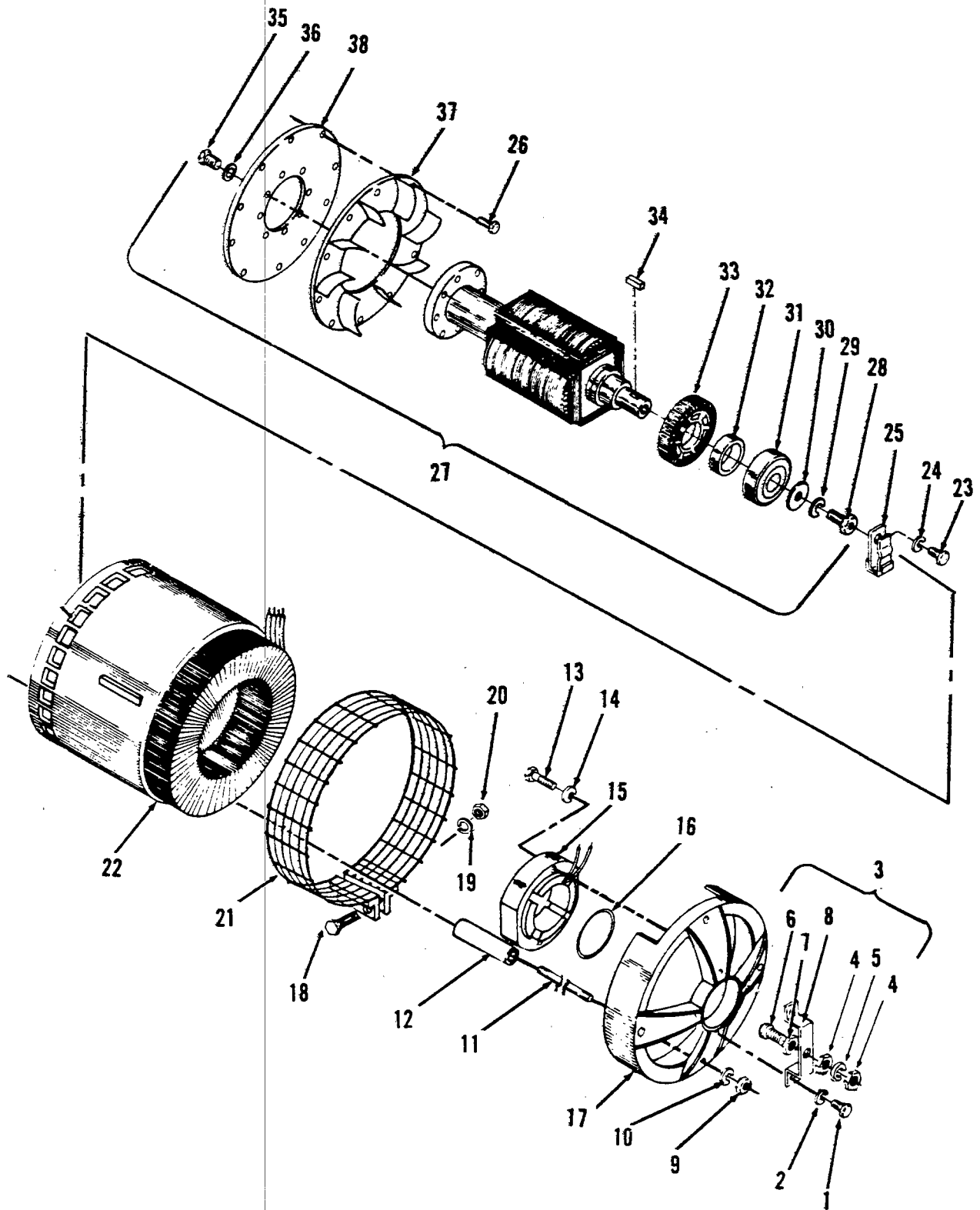
Ref. No.	Part No.	Qty. Used	Part Description
1	812-0078	2	Screw, Machine - Round Head (#8-32 x 7/16")
2	850-0025	2	Washer, Lock - Spring (#8)
3	861-0007	2	Nut, Square (#8-32)
4	356-0090	2	Capacitor, Fixed, Electrolytic (1300 MFD)
5	812-0078	6	Screw, Machine - Round Head (#8-32 x 7/16")
6	356-0102	2	Clamp, Mounting - Capacitor
7	821-0009	4	Screw, Self-locking - Hex Washer Head (1/4-20 x 3/8")
8	356-0104	1	Bracket, Mounting - Capacitor Assembly (Bracket Not Required for Square Output Boxes)

Filter - Voltage Regulator



Ref. No.	Part No.	Qty. Used	Part Description
1	332-0941	5	Tie, Cable
2	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")
3	850-0040	2	Washer, Lock - Spring (1/4")
5	812-0165	2	Screw, Machine - Round Head (1/4-20 x 4-1/2")
6	862-0001	2	Nut, Hex (1/4-20)
7	850-0040	2	Washer, Lock - Spring (1/4")
8	304-0427	4	Washer, Centering
9	304-0292	2	Insulator
10	354-0025	2	Resistor, Fixed, Wirewound (10 Ohm, 100 Watt)
11	813-0098	2	Screw, Machine - Round Head (#10-32 x 3/8")
12	870-0053	2	Nut, Hex (#10-32)
13	850-0030	2	Washer, Lock - Spring (#10)
14	312-0189	1	Bracket, Mounting - Capacitor
15	312-0188	1	Capacitor, Fixed (15 MFD, 400 VAC)
16	232-2218	1	Bracket, Mounting - Filter
17	526-0018	15	Washer, Flat (1/4")
18			Terminal Lug
	332-0529	4	Bare (14-18 AWG)
	332-1279	8	Insulated (14-18 AWG)

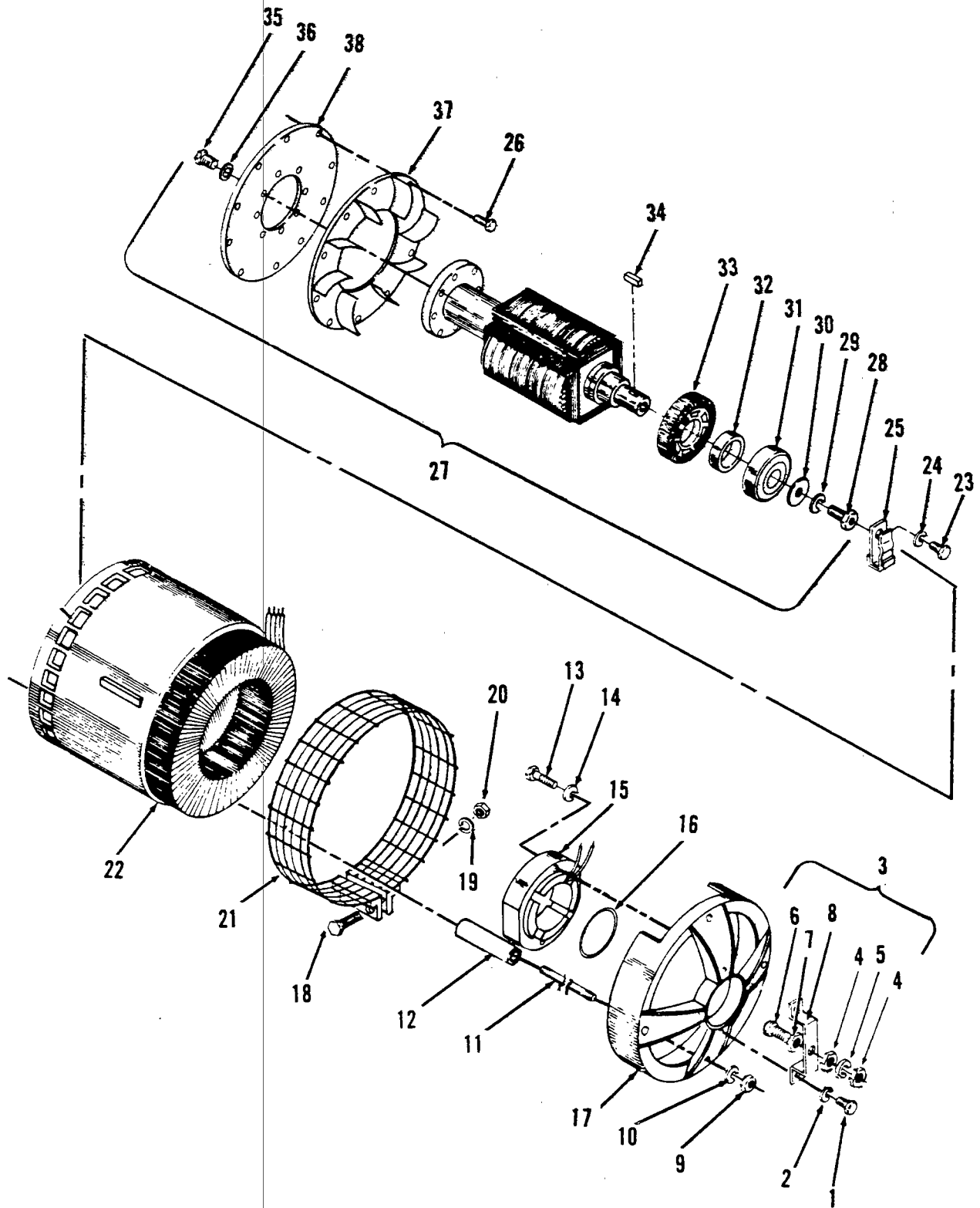
Generator



Generator (55kW, 60HZ)

Ref. No.	Part No.	Qty. Used	Part Description
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")
2	850-0050	2	Washer, Lock - Spring (1/4")
3	150-1456	1	Contact Assembly - Overspeed (Includes items 4 thru 8)
4	862-0001	2	Nut, Hex (1/4-20)
5	853-0013	1	Washer, Lock - ET (1/4")
6	150-0723	1	Contact, Electrical
7	870-0250	1	Nut, Insulator
8	150-1356	1	Bracket, Mounting - Contact
9	862-0011	4	Nut, Hex - Grade 8 (3/8-16)
10	850-0050	4	Washer, Lock - Spring (3/8")
11			Stud (3/8-16 UNC)
	520-0722	4	17 - 3/32" LG
	520-0723	4	17 - 15/16" LG
	520-0724	4	18 - 29/32" LG
	520-0726	4	20 - 1/16" LG
12	503-0611	4	Hose, Rubber
13	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")
14	850-0040	4	Washer, Lock - Spring (1/4")
15			Stator, Exciter
	220-2353	1	Standard
	220-1774	1	Enviromental Protected
16	509-0125	1	Seal, Oil - "O" Ring
17	211-0185	1	End Bell, Generator
18	800-0008	2	Screw, Cap - Hex Head (1/4-20 x 1-1/4")
19	850-0040	2	Washer, Lock - Spring (1/4")
20	862-0001	2	Nut, Hex (1/4-20)
21	234-0368	1	Screen, Air - Generator
22			Stator, Generator
		1	Code 3
	220-2625	1	Code 6D
	220-2963	1	Code 7
	220-1603	1	Code 9X
	220-1455	1	Code 15
	220-1787	1	Code 15 (Enviromental Protected)
	220-1458	1	Code 15 (Extended Stack)
		1	Code 15 (Enviromental Protected & Extended Stack)
		1	Code 53
		1	Code 515
		1	Code 515 (Enviromental Protected)
		1	Code 515 (Extended Stack)
		1	Code 515 (Enviromental Protected & Extended Stack)
23	800-0048	1	Screw, Cap - Hex Head (3/8-16 x 3/4")
24	856-0010	1	Washer, Lock - EIT (3/8")
25	150-0717	1	Switch, Overspeed
26			Screw, Cap - Hex Head (3/8-16 UNC)
	805-0018	8	1" LG
	805-0019	8	1-1/4" LG
27			Rotor Assembly, Generator (Includes items 28 thru 38)
		1	Codes 3, 53
	201-2670	1	Codes 6D, 7, 9X, 15, 515
	201-2688	1	Codes 15, 515 (Enviromental Protected)
	201-2673	1	Codes 15, 515 (Extended Stack)
		1	Codes 15, 515 (Enviromental Protected & Extended Stack)
28	800-0513	1	Screw, Cap - Hex Head with 3/8-16 Tapped Center Hole
29	850-0079	1	Washer, Lock - Spring (3/4")
30	526-0238	1	Washer, Flat - Steel Alloy (13/16"ID x 2"OD x 3/16"THK)
31	510-0101	1	Bearing, Ball
32	232-2102	1	Spacer, Sleeve
33			Rotor Assembly, Exciter (See Separate Figure for Components)
	201-1739	1	Standard
	201-1845	1	Enviromental Protected
34	515-0145	1	Key, Machine (1/4" x 1/4" x 7/8")
35			Bolt, Hex Head - Grade 8(5/8-11 UNC)
	805-0033	8	1-1/8" LG
	805-0035	8	1-1/2" LG
36	526-0259	8	Washer, Flat - Hardened Steel (11/16"ID x 1-3/8"OD x 7/64"THK)
37	205-0089	1	Fan, Generator
38	232-2078	1	Disk, Drive - Generator

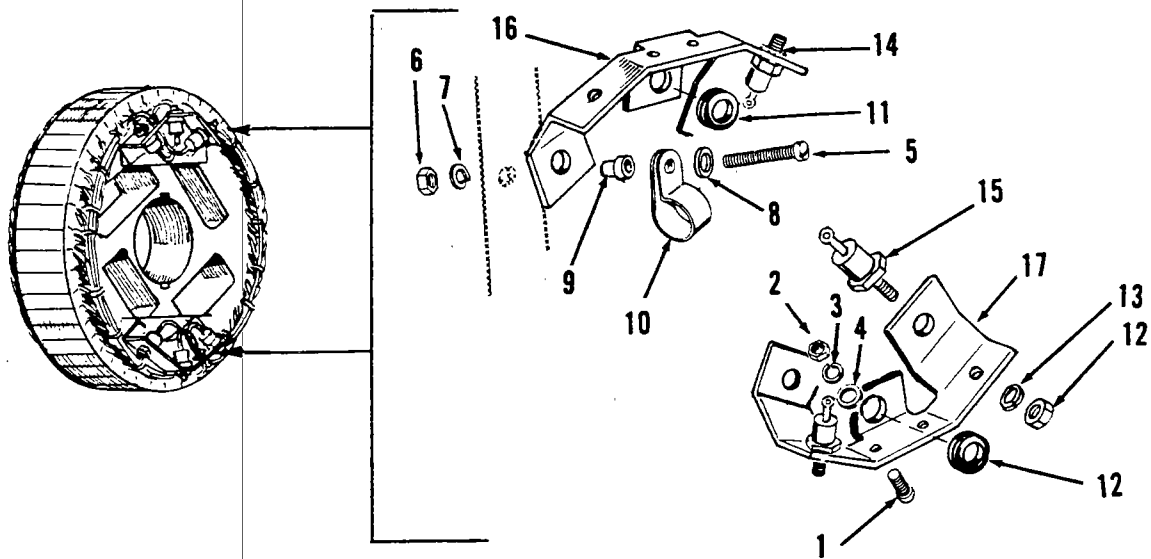
Generator



Generator (70kW, 60HZ)

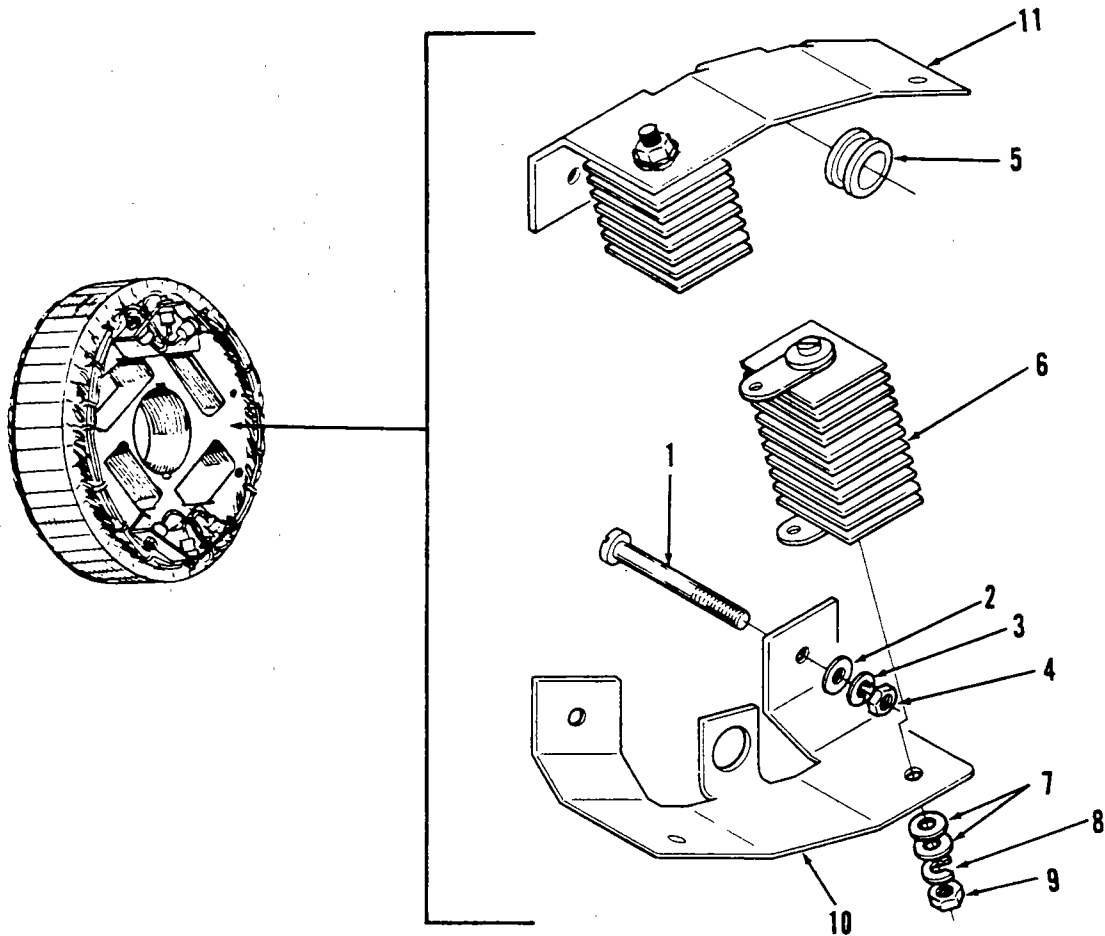
Ref. No.	Part No.	Qty. Used	Part Description
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")
2	850-0050	2	Washer, Lock - Spring (1/4")
3	150-1456	1	Contact Assembly - Overspeed (Includes items 4 thru 8)
4	862-0001	2	Nut, Hex (1/4-20)
5	853-0013	1	Washer, Lock - ET (1/4")
6	150-0723	1	Contact, Electrical
7	870-0250	1	Nut, Insulator
8	150-1356	1	Bracket, Mounting - Contact
9	862-0011	4	Nut, Hex - Grade 8 (3/8-16)
10	850-0050	4	Washer, Lock - Spring (3/8")
11			Stud (3/8-16 UNC)
	520-0724	4	18 - 29/32" LG
	520-0726	4	20 - 1/16" LG
	520-0727	4	21 - 7/16" LG
	520-0728	4	22 - 15/16" LG
12	503-0611	4	Hose, Rubber
13	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")
14	850-0040	4	Washer, Lock - Spring (1/4")
15			Stator, Exciter
	220-2353	1	Standard
	220-1774	1	Enviromental Protected
16	509-0125	1	Seal, Oil - "O" Ring
17	211-0185	1	End Bell, Generator
18	800-0008	2	Screw, Cap - Hex Head (1/4-20 x 1-1/4")
19	850-0040	2	Washer, Lock - Spring (1/4")
20	862-0001	2	Nut, Hex (1/4-20)
21	234-0368	1	Screen, Air - Generator
22			Stator, Generator
		1	Code 3
	220-2627	1	Code 6D
	220-2465	1	Code 7
	220-1605	1	Code 9X
	220-1457	1	Code 15
	220-1789	1	Code 15 (Enviromental Protected)
	220-1460	1	Code 15 (Extended Stack)
		1	Code 15 (Enviromental Protected & Extended Stack)
		1	Code 53
		1	Code 515
		1	Code 515 (Enviromental Protected)
		1	Code 515 (Extended Stack)
		1	Code 515 (Enviromental Protected & Extended Stack)
23	800-0048	1	Screw, Cap - Hex Head (3/8-16 x 3/4")
24	856-0010	1	Washer, Lock - EIT (3/8")
25	150-0717	1	Switch, Overspeed
26			Screw, Cap - Hex Head (3/8-16 UNC)
	805-0018	8	1" LG
	805-0019	8	1-1/4" LG
27			Rotor Assembly, Generator (Includes items 28 thru 38)
		1	Codes 3, 53
	201-2672	1	Codes 6D, 7, 9X, 15, 515
	201-2690	1	Codes 15, 515 (Enviromental Protected)
	201-2675	1	Codes 15, 515 (Extended Stack)
		1	Codes 15, 515 (Enviromental Protected & Extended Stack)
28	800-0513	1	Screw, Cap - Hex Head with 3/8-16 Tapped Center Hole
29	850-0079	1	Washer, Lock - Spring (3/4")
30	526-0238	1	Washer, Flat - Steel Alloy (13/16"ID x 2"OD x 3/16"THK)
31	510-0101	1	Bearing, Ball
32	232-2102	1	Spacer, Sleeve
33			Rotor Assembly, Exciter (See Separate Figure for Components)
	201-1739	1	Standard
	201-1845	1	Enviromental Protected
34	515-0145	1	Key, Machine (1/4" x 1/4" x 7/8")
35			Bolt, Hex Head - Grade 8(5/8-11 UNC)
	805-0033	8	1-1/8" LG
	805-0035	8	1-1/2" LG
36	526-0259	8	Washer, Flat - Hardened Steel (11/16"ID x 1-3/8"OD x 7/64"THK)
37	205-0089	1	Fan, Generator
38	232-2078	1	Disk, Drive - Generator

Exciter Rotor



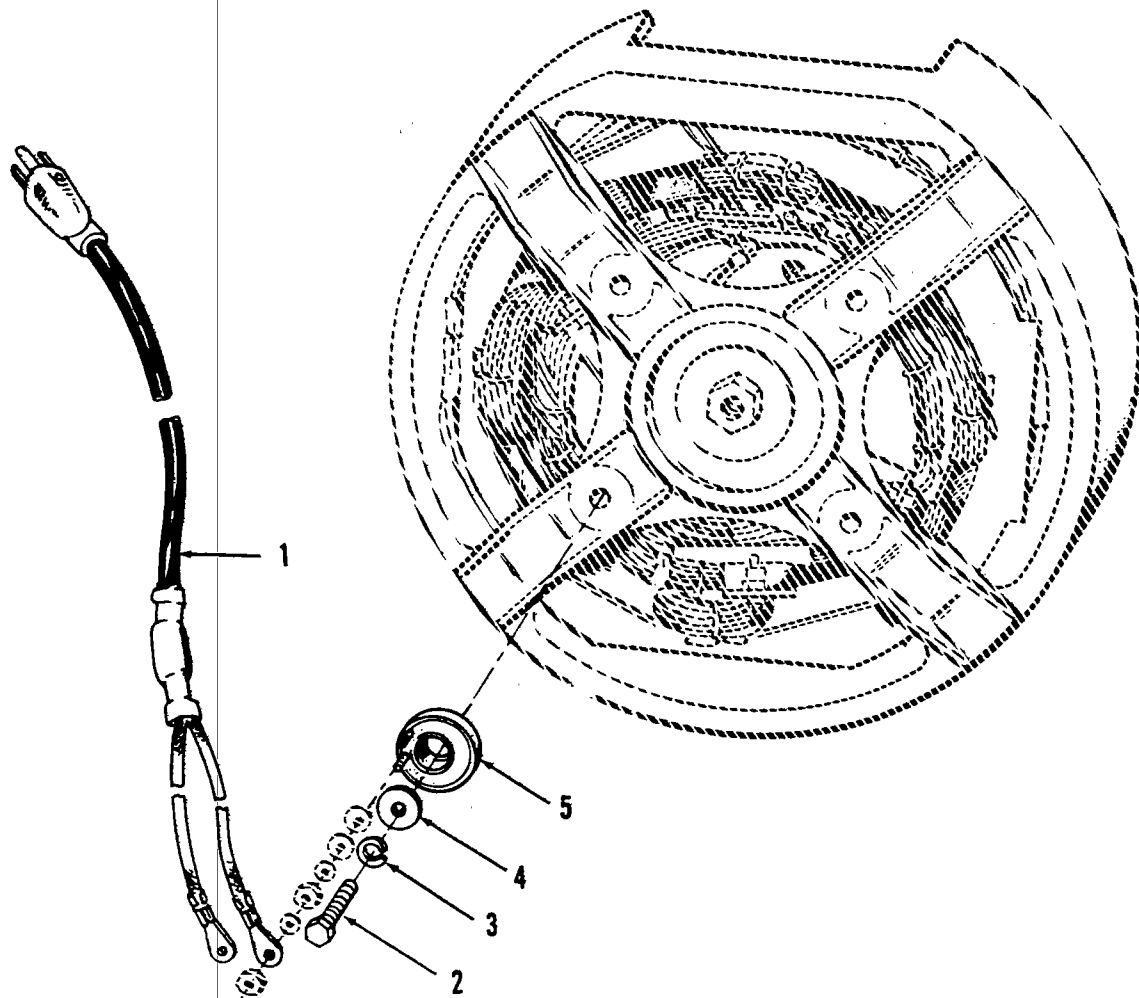
Ref. No.	Part No.	Qty. Used	Part Description
1	813-0100	2	Screw, Machine - Round Head (#10-32 x 1/2")
2	870-0053	2	Nut, Hex (#10-32)
3	850-0030	2	Washer, Lock - Spring (#10)
4	526-0008	2	Washer, Flat (13/64"ID x 7/16"OD x 1/32"THK)
5	813-0110	4	Screw, Machine - Round Head (#10-32 x 2")
6	870-0053	4	Nut, Hex (#10-32)
7	850-0030	4	Washer, Lock - Spring (#10)
8	526-0009	4	Washer, Flat (7/32"ID x 1/2"OD x 1/16"THK)
9	508-0187	4	Spacer, Stepped
10	332-0050	2	Clamp, Loop
11	508-0093	2	Crommet, Rubber
12	870-0053	6	Nut, Hex (#10-32)
13	850-0030	6	Washer, Lock - Spring (#10)
14			Diode, Rectifier - Positive (CR1, CR2, CR3)
	358-0097	3	Standard
	358-0044	3	Environmental Protected
15			Diode, Rectifier - Negative (CR4, CR5, CR6)
	358-0096	3	Standard
	358-0043	3	Environmental Protected
16	363-0054	1	Heatsink - Positive Diodes
17	363-0055	1	Heatsink - Negative Diodes

Voltage Suppressor



Ref. No.	Part No.	Qty. Used	Part Description
1	813-0112	4	Screw, Machine - Round Head (#10-32 x 2-1/2")
2	526-0140	4	Washer, Flat (7/32"ID x 3/8"OD x 3/64"THK)
3	850-0030	4	Washer, Lock - Spring (#10)
4	870-0053	4	Nut, Hex (#10-32)
5	508-0093	2	Grommet, Rubber
6	305-0526	1	Set, Voltage Suppressor (A Matched Pair)
7	526-0140	4	Washer, Flat (7/32"ID x 3/8"OD x 3/64"THK)
8	850-0030	4	Washer, Lock - Spring (#10)
9	870-0053	4	Nut, Hex (#10-32)
10	363-0054	1	Heatsink - Positive Diodes
11	363-0055	1	Heatsink - Negative Diodes

Generator Heater

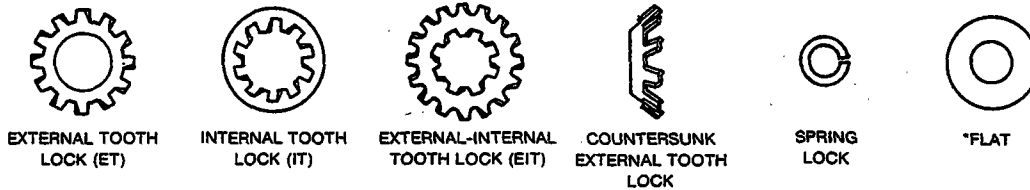


Ref. No.	Part No.	Qty. Used	Part Description
1	335-0146	1	Cable, Electrical (Includes THERMOSTAT)
	335-0147	1	120 VAC
		1	240 VAC
2	800-0004	1	Screw, Cap - Hex Head (1/4-20 x 5/8")
3	850-0038	1	Washer, Lock - Spring (1/4")
4	526-0158	1	Washer, Flat (17/64"ID x 1"OD x 1/8"THK)
5	333-0059	1	Heater, Electrical
	333-0192	1	120 VAC, 125 Watt
		1	240 VAC, 200 Watt

HARDWARE IDENTIFICATION

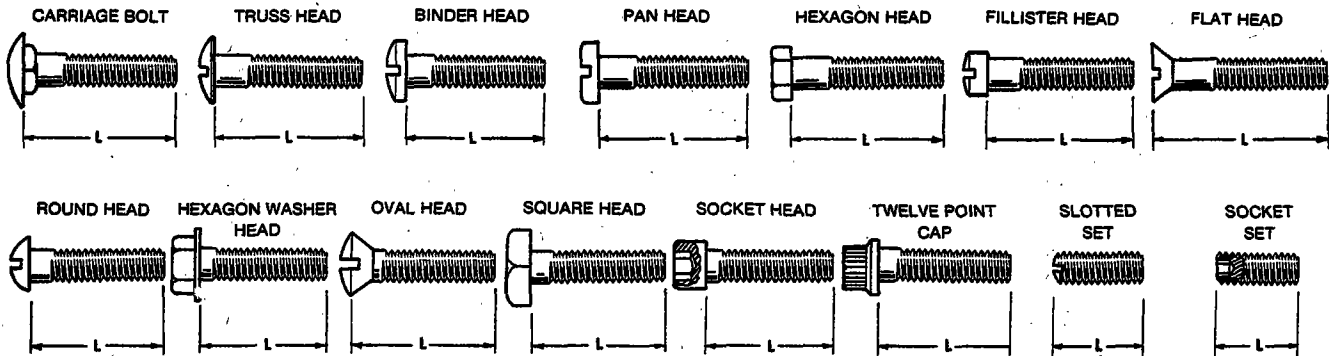
Illustrated hardware items are only for identification purposes. All hardware items listed throughout this parts catalog are steel SAE grade five (5) or lower (zinc plated with clear chromate dip) unless parts description indicates differently. All dimensions are in inches.

WASHER TYPES



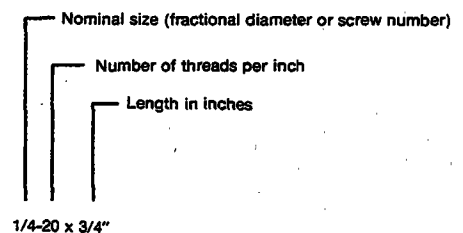
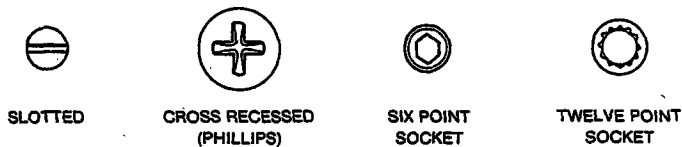
* - Flat washer dimensions given are: Inside Diameter (ID), Outside Diameter (OD) and Thickness (Thk).

BOLT AND SCREW TYPES



L - Measure length between these points.

INTERNAL DRIVE TYPES



NUT TYPES





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